

NATIONAL CENTER FOR EDUCATION STATISTICS

SASS and TFS CD-ROM Technical Reference Manual

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Table of Contents

- I. Introduction
 - Overview of SASS and TFS
 - Public- and Restricted-use data files
 - Hardware and Software requirements for ECBs
 - Research issues addressed
- II. Brief Description of the SASS and TFS Files
 - Evolution of SASS and TFS
 - Files number of variables and observations
 - Survey instruments
- III. Ensuring Valid Data, Survey Response Rates, and Nonresponse
 - NCES data file review and Bureau of the Census edits
 - User edit procedures
 - Response rates and potential nonresponse bias
- IV. Confidentiality: Public- and Restricted-use Files
 - Public and Restricted-use file differences
 - Merging files, linking files within a SASS cycle and linking SASS to TFS
 - Notes on linking SASS and TFS
- V. Created Variables on the Public-and Restricted-use Data Files
- VI. Selecting Variables for Working Data Files
 - Subsetting files
 - Selection criteria for merged files
- VII. Examples of Programming Process for SASS Data
 - Merge files within a cycle and produce frequency table
 - Merging different components within a cycle
 - Subsetting of data
 - Merging data across cycles
- VIII. Final and Replicate Weights
 - Need for final and replicate weights
 - Final weights by file and cycle and replicate weight naming convention
- IX. Working with Missing Data
 - Sources of missing data
 - Imputing missing data
 - Imputation flags
- X. Analysis of SASS and TFS

- Appendix A: Crosswalk
- Appendix B: Glossary
- Appendix C: Other Publications of Interest
- Appendix D: References
- Appendix E: Variable names for 1990-91 SASS district and school files with
 - corresponding questionnaire source code numbers
- Appendix F: Warnings and notes about working with the CD-ROM data and ECB

I. Introduction

A. Purpose of This Reference Manual

The SASS and TFS CD-ROM contains a compilation of all of the Schools and Staffing Survey (SASS) data and data from its sister survey, the Teacher Follow-up Survey (TFS), collected during the first three cycles of administration. This CD-ROM contains the most up-to-date versions of the files, including created variables, and supersedes previous versions of the ECBs and data files. These data provide a wealth of information about public school districts and public and private schools with students in any of grades 1-12, their principals, teachers, librarians, and students. This guide is designed to provide researchers who choose to use SASS data with file components and technical information required to properly manipulate the data while developing analyses and research ideas. It is meant to serve only as a technical guide and does not replace the available SASS user documentation.

B. Overview of SASS and TFS

In the early 1980s, education policymakers became increasingly aware of the need for studies that would provide national data on public and private schools, their programs, teachers, and staffing levels. Such data would inform policymakers about the status of teaching and education, identify the areas that most need improvement, and clarify conflicting reports on issues related to policy initiatives, such as teacher shortages.

Under a contract with the National Center for Education Statistics (NCES), the Rand Corporation redesigned the existing elementary/secondary education surveys to collect information relevant to their expanded purposes and to correct the methodological difficulties affecting the surveys. The outcome of the effort was a set of concurrent and integrated surveys called the Schools and Staffing Survey (SASS) which was designed to provide a composite national snapshot of America's public and private schools. The SASS was first conducted by the U.S. Bureau of the Census, the data collection agent for SASS, during the 1987-88 school year, and again in 1991-92 and 1993-94. The survey consists of the following core components:

- o Teacher Demand and Shortage Questionnaire
- o School Principal Questionnaire (known as the Administrator Questionnaire in the 1987-88 and 1990-91 SASS surveys)
- o School Questionnaire
- o School Teacher Questionnaire

During the 1990-91 cycle, an Indian School Questionnaire was added (Note: The Indian School data are not included on the SASS and TFS CD-ROM). During the 1993-94 cycle, the following components were added:

- o Student Records Questionnaire
- o Library Media Center Questionnaire
- o Library Media Specialist/Librarian Questionnaire

The analytical power of the data is enhanced by the ability to link survey data for individual local education agencies (LEAs), schools, administrators, and teachers. For the 1993-94 cycle the data is further enhanced by linking students, Library Media Centers, and librarians with schools, administrators, and teachers. The use of comparable questions in each cycle of SASS makes it possible to monitor changes in the nation's elementary and secondary school system.

The Teacher Follow-up Survey (TFS) is a follow-up of selected teachers from the SASS Teacher Survey and is conducted in the school year following SASS (i.e., 1988-89, 1991-92, 1994-95). The sample consists of all interviewed SASS teachers who left teaching within the year after SASS ("leavers"), a subsample of those who remained teaching in the same school ("stayers"), and a subsample of those who remained teaching, but in another school ("movers").

The major objectives of this survey are to measure:

- o the attrition rate for teachers,
- o the characteristics of those who stay in the teaching profession,
- o the characteristics of those who leave,
- o the activities or occupations of those who leave the teaching profession, and
- o the attitudes about the teaching profession and job satisfaction for
 - those who leave the teaching profession
 - those who keep teaching in the same school, and
 - those who keep teaching, but in a different school.

C. Accessing data with electronic codebooks

The SASS and TFS data files are available on CD with ASCII text file versions of the User guides for each data file, files that comprise the programmer's companions for each data file, and electronic codebooks (ECBs) for viewing and retrieval of the data. Each CD will come with specific instructions on how to

install and use the SASS CD included in a user's guide. The basic hardware and software requirements for using an ECB is listed below so that you may determine if you can install an ECB on your machine.

The following hardware is the minimum configuration you need to run the SASS ECBs. The data retrieval speed of the ECBs is partially dependent on the hardware. In general, the more memory and hard disk capacity you have, the better performance you will experience.

IBM PC 386 or higher PC (100% IBM compatible), a hard disk with at least 4.0 MB free for installation and an additional 3.0 MB free to run an ECB. Additional hard disk space will be required for storage of exported data.

CD-ROM reader with appropriate controller and interface cable for your PC.

MS-WINDOWS version 3.1 or higher.

A mouse is the most appropriate tool to access menu options by "clicking" on the field. However, keyboard strokes may be used to activate functions in the ECB.

For a description of how to install and use an ECB refer to the Schools and Staffing and Teacher Followup Survey CD-ROM: Electronic Codebook User's Guide for DOS. There is also a version of the users' guide for Windows. The guides will also give you a more detailed description of the CD-ROM file organization and disk space requirements.

D. Public- and Restricted-use Data Files

Both SASS and TFS data files are available in two versions: public-use data (available to all data users) and restricted-use data (available only to NCES-licensed data users). In the public-use data, all state identifiers and stratum codes have been removed to prevent identification of individual administrators, teachers, or students. Detailed affiliation codes for private schools have been collapsed into three categories: Catholic, Other Religious, and Non-Sectarian. On the Administrator and the Teacher files, income, age, and college or university information were coded into categories.

Restricted-use data files have data that make it possible to identify individuals, such as reported salary or exact age. Restricted-use data files also permit analysis at the state level. Researchers requiring access

to
these data files must obtain a license from NCES to use these data. To
obtain
a license, the following information is necessary:

- o the title of the survey to which access is required;
- o a detailed discussion of the statistical research project;
- o the name and title of the most senior official having authority
to
bind the organization to the provisions of the license
agreement;
- o the name and title of the principal project officer who will
oversee
the daily operations;
- o the phone number, name(s), and title(s) of professional and
technical
staff who will have access to the survey data;
- o the estimated loan period required for accessing the survey
data;
- o the desired media format and conversion (e.g., 9-track tape, CD-
ROM,
ASCII, EBCDIC).

Return all of the above information to:

Statistical Standards and Services Group
NCES/OERI
U.S. Department of Education
555 New Jersey Avenue, N.W.
Washington, D.C. 20208

The Associate Commissioner for Statistical Standards and Methodology
will
review the information submitted and inform the requestor whether a
license to
use the restricted data is approved.

E. Research Issues Addressed with the SASS

The analytic objectives for the SASS address major areas of education.
Furthermore, because SASS is an integrated system of surveys, it is
possible
to link data derived from one survey component with another. Therefore,
responses given by teachers may be analyzed with information about their
schools, school administrators, or school districts. Educators and
educational
policy makers may use data from SASS to characterize and analyze:

- o The nation's public and private elementary and secondary
teaching
force;
- o The nation's elementary and secondary public and private
schools, their
programs and policies;
- o Teacher demand (projections and estimates) by teaching field,
sector,
level, and geographic location;
- o Teacher mobility and turnover;
- o Assessments of teacher quality and qualifications;
- o School policies, practices, and programs;

- o Workplace conditions;
- o Administrator and teacher characteristics, and workplace conditions;
- o Teacher salaries, teacher retirement plans, incentive plans, and staff training programs;
- o Estimates of teachers by race, certification status, teaching experiences and training;
- o Characteristics of newly hired teachers and the sources of supply of newly hired teachers;
- o Demographics and economic characteristics of current and former teachers (movers, leavers, and stayers);
- o Data on student programs and services used;
- o Data on school libraries (supplies and materials) and librarian's salaries, benefits, and educational background (1993-94 SASS). (Overview of SASS, 1996, 2; Overview of SASS and TFS, 1994, p. 2)

The SASS sample also was designed to support the following types of estimates and comparisons:

- o National estimates for public and private schools, teachers, and administrators;
- o State estimates for public school, teachers, school libraries, and librarians;
- o State/elementary, state/secondary, and national combined public school estimates;
- o Private school association estimates and grade level estimates;
- o Estimates of change from 1988 to 1994 in school level characteristics;
- o National estimates of public and private school student demographics;
- o National estimates for public and private school libraries, librarians, and students by school level and urbanicity (1993-94 SASS);
- o National estimates for private school libraries, librarians, and students by major affiliation (Catholic, other religious, and non-sectarian). (Overview of SASS, 1996, p. 2-3).

In addition, SASS data can be used to address, at least in part, policy issues like the following:

- o What is the extent of turnover in the nation's teaching force?
- o What are the sources of new teachers?
- o Do the nation's teachers have adequate academic backgrounds?
- o Are the nation's school administrators fully prepared to carry out their functions as educational and managerial leaders?
- o How are school programs and policies related to teacher turnover and attrition?
- o How do geographic location, community size, and school size affect students' access to programs and services?
- o What are the academic requirements for graduation in the United

States,
and how do they vary by state and type of school?
(Overview of SASS, 1996, p. 3; Overview of SASS and TFS, 1994,
p. 2)

F. Technical Expertise

Technical help in using the SASS and TFS CD-ROM can be obtained by e-mail at the following address:

National Education Data Resource Center at NEDRC@inet.ed.gov

Questions pertaining to either the SASS or TFS can be obtained by e-mail at the following addresses:

General SASS/TFS issues:	Dan Kasprzyk	at
Dan_Kasprzyk@ed.gov		
Survey sample design, weighting:	Steve Kaufman	at
Steve_Kaufman@ed.gov		
Content and analysis of SASS/TFS:	SASSDATA@ed.gov	
	Steve Broughman	at
Steve_Broughman@ed.gov		
	Kerry Gruber	at
Kerry_Gruber@ed.gov		
	Mary Rollefson	at
Mary_Rollefson@ed.gov		

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II. Brief Descriptions of the SASS and TFS Files

The Schools and Staffing Survey (SASS) is a unified set of surveys that facilitates comparison between public and private schools and allows linkages of teachers, schools, school districts and administrator data. A Teacher Follow-up Survey (TFS) is conducted one year after each cycle of the SASS to collect information on the teacher's employment and teaching status, educational activities, future plans, and opinions on school climate and job perception (Overview of SASS, 1996, p. 1). There are four core components in the SASS:

- o Teacher Demand and Shortage Survey
- o School Principal Survey (known as the Administrator Questionnaire in the 1987-88 and 1990-91 surveys)
- o School Survey
- o Teacher Survey

A. Evolution of the SASS Design through its Questionnaires: 1987-88 to 1990-91 to 1993-94

The first SASS and TFS cycles started in 1987 and 1988 with an initial set of questionnaires. Because of changes and refinements additional questionnaires were added to subsequent cycles. The evolution of the SASS design is demonstrated with the following list of questionnaires for the initial cycles and additions made for each subsequent cycle.

1987-88 Initial SASS cycle:

- o Teacher Demand and Shortage Questionnaire (public, private)
- o School Administrator Questionnaire (public, private)
- o School Questionnaire (public, private)
- o School Teacher Questionnaire (public, private).

1988-89 Initial TFS cycle:

- o Teacher Follow-up Questionnaire for Former Teachers
- o Teacher Follow-up Questionnaire for Current Teachers.

1990-91 Second SASS cycle:

- o Teacher Demand and Shortage Questionnaire (public)

- o School Administrator Questionnaire (public, private)
- o School Questionnaire (public, private, Indian)
- o School Teacher Questionnaire (public, private).

1991-92 Second TFS cycle:

- o Teacher Follow-up Questionnaire for Former Teachers
- o Teacher Follow-up Questionnaire for Current Teachers.

1993-94 Third SASS cycle:

- o Teacher Listings for Public and Private Schools
- o Teacher Demand and Shortage Questionnaire (public)
- o School Principal Questionnaire (public, private, Indian)
- o School Questionnaire (public, private, Indian)
- o School Teacher Questionnaire (public, private, Indian)
- o Student Records Questionnaire (collects student data from school administrative records)
- o Library Media Center Questionnaires (public, private, Indian)
- o Library Media Specialist/Librarian Questionnaires (public, private, Indian).

1994-95 Third TFS cycle:

- o Teacher Follow-up Questionnaire for Former Teachers
- o Teacher Follow-up Questionnaire for Current Teachers.

List of files by year including number of variables and observations.

1. 1987-88 SASS files

Teacher Demand and Shortage files for public school districts (LEAs)

Number of Variables:	Restricted-use 406	Public-use 352
Number of Observations:	Restricted-use 4826	Public-use 4826

Teacher Demand and Shortage files for private school districts (LEAs)

Number of Variables:	Restricted-use 406	Public-use 352
Number of Observations:	Restricted-use 2095	Public-use 2095

Public School Administrator file

Number of Variables:	Restricted-use 296	Public-use 277
Number of Observations:	Restricted-use 8519	Public-use 8519

Private School Administrator file

Number of Variables:	Restricted-use 296	Public-use 277
Number of Observations:	Restricted-use 2436	Public-use 2436

Public School file

Number of Variables:	Restricted-use 486	Public-use 375
Number of Observations:	Restricted-use 8326	Public-use 8326

Private School file

Number of Variables:	Restricted-use 486	Public-use 375
Number of Observations:	Restricted-use 2459	Public-use 2459

Public School Teacher file

Number of Variables:	Restricted-use 720	Public-use 656
Number of Observations:	Restricted-use 40593	Public-use 40593

Private School Teacher file
Number of Variables: Restricted-use 720 Public-use 656
Number of Observations: Restricted-use 6764 Public-use 6764

2. 1988-89 TFS Files

Public Teacher file
Number of Variables: Restricted-use 1100 Public-use 1036
Number of Observations: Restricted-use 4812 Public-use 4812

Private Teacher file
Number of Variables: Restricted-use 1100 Public-use 1036
Number of Observations: Restricted-use 1951 Public-use 1951

3. 1990-91 SASS Files

Teacher Demand and Shortage file for public school districts
Number of Variables: Restricted-use 839 Public-use 336
Number of Observations: Restricted-use 4884 Public-use 4884

Public School Administrator file
Number of Variables: Restricted-use 338 Public-use 280
Number of Observations: Restricted-use 9054 Public-use 9054

Private School Administrator file
Number of Variables: Restricted-use 338 Public-use 280
Number of Observations: Restricted-use 2757 Public-use 2757

Public School file
Number of Variables: Restricted-use 839 Public-use 581
Number of Observations: Restricted-use 8969 Public-use 8969

Private School file
Number of Variables: Restricted-use 839 Public-use 581
Number of Observations: Restricted-use 2620 Public-use 2620

Public School Teacher file
Number of Variables: Restricted-use 744 Public-use 693
Number of Observations: Restricted-use 46705 Public-use 46705

Private School Teacher file
Number of Variables: Restricted-use 744 Public-use 693
Number of Observations: Restricted-use 6642 Public-use 6642

4. 1991-92 TFS Files

Public Teacher file
Number of Variables: Restricted-use 1174 Public-use 1166
Number of Observations: Restricted-use 4761 Public-use 4761

Private Teacher file
Number of Variables: Restricted-use 1174 Public-use 1166
Number of Observations: Restricted-use 1972 Public-use 1972

5. 1993-94 SASS Files

Teacher Demand and Shortage file for public school districts

Number of Variables: Restricted-use 1162 Public-use 250
Number of Observations: Restricted-use 4993 Public-use 4993

Public School Principal file

Number of Variables: Restricted-use 433 Public-use 403
Number of Observations: Restricted-use 9098 Public-use 9098

Private School Principal file

Number of Variables: Restricted-use 433 Public-use 403
Number of Observations: Restricted-use 2743 Public-use 2743

Public School file

Number of Variables: Restricted-use 1162 Public-use 679
Number of Observations: Restricted-use 8767 Public-use 8767

Private School file

Number of Variables: Restricted-use 1162 Public-use 679
Number of Observations: Restricted-use 2585 Public-use 2585

Public School Teacher file

Number of Variables: Restricted-use 710 Public-use 692
Number of Observations: Restricted-use 47105 Public-use 47105

Private School Teacher file

Number of Variables: Restricted-use 710 Public-use 692
Number of Observations: Restricted-use 8372 Public-use 8372

Student Records file

Number of Variables: Restricted-use 299
Number of Observations: Restricted-use 6828

6. 1993-94 SASS Library Survey

Public School Library Media Center file

Number of Variables: Restricted-use 416
Number of Observations: Restricted-use 4242

Private School Library Media Center file

Number of Variables: Restricted-use 416
Number of Observations: Restricted-use 1607

Public School Library Media Specialist/Librarian file

Number of Variables: Restricted-use 458
Number of Observations: Restricted-use 3903

Private School Library Media Specialist/Librarian file

Number of Variables: Restricted-use 458
Number of Observations: Restricted-use 1138

7. 1994-95 TFS Files

Public Teacher file

Number of Variables: Restricted-use 1471 Public-use 1439
Number of Observations: Restricted-use 4528 Public-use 4528

Private Teacher file

Number of Variables: Restricted-use 1471 Public-use 1439
Number of Observations: Restricted-use 1751 Public-use 1751

C. Survey Instruments and Content

The SASS and TFS surveys were conducted multiple times from 1987-88 to 1994-95. This section briefly describes what is included in each questionnaire used to collect the SASS and TFS data and the changes in questionnaires between cycles. To compare the response to a particular question over more than one SASS cycle it is necessary to make sure the same questions was asked in each of the cycles. Appendix A is a listing of variables available for the 1993-94 SASS and 1995 TFS cycles and the corresponding variables for each earlier cycle.

1. Teacher Demand and Shortage (TDS) Questionnaire

The purpose of the Teacher Demand and Shortage Questionnaire is to obtain data from local education agencies (LEAs) that can be used to measure the supply and demand for public school teachers and to examine policies that may affect teacher supply and demand (e.g., salary, retirement plans, and incentive plans). The questionnaires, which were mailed only to public school districts (except in 1987-88), were divided into five sections. The first section requested information about student enrollment. The second section requested information about teachers. The third section requested information about library media specialists/librarians. The fourth section requested information about programs and services provided by the school district. The fifth section, on district policies, requested information on teacher salary schedules, staff training incentives, and high school graduation requirements.

Content changes in the TDS Questionnaire over the SASS cycles included:

1987-88 Questionnaire sent to both public school districts and private schools. 1990-91 Questionnaire sent to only public school districts; private schools received questions on aggregate demand for both new and continuing teachers. It was also expanded to include data on the demand and shortage of librarians and pension portability (Gruber, Rohr, Fondelier, 1990-91 SASS: Data File User's Manual, Vol. I, 1994, pp. 10-11). 1993-94 Questionnaire expanded to included the following additional questions (questionnaire item numbers shown in parentheses):

- o number of days in school year (8);
- o whether test results were released to the public (9);
- o number of itinerant teachers (12);

- o number of teaching positions abolished, withdrawn, or filled by a substitute teacher because of budget cuts (14);
- o number of newly hired teachers with emergency certification (15c);
- o number of librarians laid off at end of previous school year (21);
- o prekindergarten programs (22);
- o participation in Chapter 1 programs (23);
- o participation in federal lunch program (24);
- o enrollment choice programs (25);
- o whether community service was required for high school graduation (27);
- o whether district had a written policy on discipline and/or drug use (28);
- o whether district had an agreement with a teachers' union or association (30);
- o teachers' pay incentives for completion of training or college courses (39).

Items that collected data on the previous year's enrollment, number of postsecondary students and teachers, teacher benefits, and merit pay for teachers were deleted from the questionnaire (Gruber, Rohr, Fondelier, 1993-94

SASS: Data File User's Manual, Vol. I, 1996, p. 4).

2. The School Principal* Questionnaire

* In 1987-88 and 1990-91 the survey instrument was titled .School Administrator Questionnaire., although the respondents were defined as principals or heads of the school.

The School Principal Questionnaire obtained information about the training, experience, professional background, and demographic characteristics of school principals/school heads and about the types of school problems that principals view as serious. Questions required both objective responses (e.g., number of years of teaching experience) and judgmental responses (e.g., ranking the seriousness of school problems). Three versions of the School Principal Questionnaires were sent to the principals or heads of public schools, private schools, and Bureau of Indian Affairs (BIA) schools, respectively. The three versions contained only minor differences in phrasing to reflect possible differences in governing bodies and position titles between public school, private schools, and BIA schools (SASS and PSS Questionnaires 1993-94, 1994).

Content changes in the School Principal Questionnaire over the SASS cycles included:

1987-88	--
1990-91	Remained essentially unchanged (Gruber, Rohr, Fondelier, 1990-91

SASS: Data File User's Manual, Vol. I, 1994, p. 12).

1993-94 Included the following additional questions (questionnaire item numbers shown in parenthesis):

- o college where bachelor's degree was earned (6);
- o information on second bachelor's (7) and master's (9) degrees;
- o whether respondent is a teaching principal (13);
- o breaks in education career (19);
- o year when eligible for retirement (21);
- o years in other positions prior to becoming a school principal (14);
- o principal's perception of his/her influence on school expenditures, content of in-service programs, and teacher evaluations (25).

The 1990-91 item that asked the principal to rate the school's teaching staff was not included on the 1993-94 questionnaire (Gruber, Rohr, Fondelier, 1993-94 SASS: Data File User's Manual, Vol. I, 1996, p. 4).

3. The School Questionnaire

The purpose of the School Questionnaire is to collect information on the characteristics of schools (e.g., enrollment, student-staff ratios, programs and services offered, and length of school day). Questionnaires were sent to public, private, and Bureau of Indian Affairs (BIA) schools. The private school version of the questionnaire included items for identifying the religious or other affiliation of the school. Private and BIA School Questionnaires also asked about the number of teachers (in full-time equivalents [FTEs]), hiring criteria, incentives for staff training, and high school graduation requirements (this information was obtained for public schools through the Teacher Demand and Shortage Questionnaire).

Content changes in the School Questionnaires over the SASS cycles included:

1987-88 -- 1990-91 Expanded to include data on types of prekindergarten and kindergarten programs offered and degree of difficulty of filling teacher vacancies by teaching field (Gruber, Rohr, Fondelier, 1990-91 SASS: Data File User's Manual, Vol. I, 1994, p. 11).

1993-94 Expanded to include the following additional questions (question item numbers are in parenthesis):

- o programs for students who are limited English proficient (LEP) (21);
- o prekindergarten (26);
- o job placement services for high school seniors (29b);
- o "Tech-Prep" programs (29c);
- o drug, alcohol, and tobacco use prevention (31);
- o alcohol and drug counseling (32);

- o courses in American Indian or Alaska Native culture and language (24)

In addition to the items listed above, questions to collect the following data

were also added to the specific school questionnaires:

Public School Questionnaire - whether the school offered a magnet program (15) or had a decision-making body (33); Private School Questionnaire - year the school was founded (20), number of teachers certified by private associations (27b), whether community service was required for high school graduation (43), whether the school supported a home schooling program (16b), discipline and drug use policies (45), teacher pay incentives for completion of training (54); Indian School Questionnaire - whether community service was required for high school graduation (37), discipline and drug use policies (39), teacher pay incentives for completion of training (48);

Items to collect the following data were deleted from the School Questionnaires between the 1990-91 and 1993-94 surveys:

- o previous year's enrollment;
- o level of school;
- o type of community (information was available from school sample files, therefore, the question was unnecessary);
- o students who attend another school for part of the day;
- o high school programs (college prep, vocational-tech, general track);
- o teachers with advanced degrees;
- o counts of teachers by years of experience;
- o number of new teachers by teaching field;
- o number of teachers who left by teaching field;
- o volunteers;
- o teacher evaluation program;
- o mentor program for new teachers.

The 1990-91 survey items that collected the following data were also deleted from the specific school questionnaires for 1993-94:

Public School Questionnaire - number of days in school year (for the 1993-94 survey, this information was obtained from the district that operated the school); Private School Questionnaire - number of postsecondary students and teachers, number of teachers during previous school year, merit pay programs for teachers, teachers' benefits; Indian School Questionnaire - number of postsecondary students and teachers, number of teachers during previous school year, merit pay programs for teachers, teachers' benefits. (Gruber, Rohr,

Fondelier, 1993-94 SASS: Data File User's Manual, Vol. I, 1996, p. 5).

4. The Teacher Questionnaire

The purpose of the Teacher Questionnaire is to collect data that can be used

to describe the nation's teachers - their demographic characteristics, education, experience, and teaching assignments, as well as their perceptions

and attitudes about workplace conditions, their jobs, and teaching in general.

These questionnaires were sent to teachers in public, private, and BIA schools. The three versions of the questionnaire were virtually identical.

The 1993-94 Teacher Questionnaire featured expanded certification categories

(including alternative teacher certification), an expanded section on teacher

professional development and in-service education, questions about benefits

received (comparable to questions in the administrator questionnaire), and a

return to the 1987-88 SASS teacher opinion items (SASS and PSS Questionnaires

1993-94, 1994).

Content changes in the Teacher Questionnaires over the SASS cycles included:

1987-88 -- 1990-91 Expanded to include more data on professional activities

(Gruber, Rohr, Fondelier, 1990-91 SASS: Data File User's Manual, Vol. I, 1994,

12). 1993-94 Expanded to include the following specific questions (question

item numbers are in parenthesis):

- o college where bachelor's degree was earned (16);
- o information about second bachelor's (17) and master's (19) degrees;
- o certification by other states or for fields other than those currently taught (24);
- o whether respondent was a Chapter 1 teacher (27);
- o participation in in-service training, committees, college courses (30-33);
- o number of tardy students and classroom disruptions during previous week (43);
- o whether respondent has ever been threatened (49) or physically attacked (50);
- o year when eligible to retire (51);
- o limited English proficient (LEP) students taught (63).

1990-91 items that collected the following data were not included on the 1993-94 Teacher Questionnaires:

- o levels (elementary, middle school, etc.) at which the respondent had

- o ever taught;
- o number of college courses in teaching methods and in subjects currently taught;
- o whether he/she assigned homework during previous week;
- o achievement level of students in each class taught by respondent;
- o number of male students and minority students in each class taught by respondent;
- o grade level of most students in each class taught by respondent;
- o ranking of some educational goals;
- o main activity previous school year;
- o whether he/she received pay incentives (Gruber, Rohr, Fondelier, 1993-94 SASS: Data File User's Manual, Vol. I, 1996, p. 5).

5. Student Records Questionnaire

In 1993-94, a Student Records component was added to the SASS. The purpose of this questionnaire is to collect data that can be used to examine the distribution of school programs and quality of teachers among students of differing demographic and academic characteristics, and to describe the participation of students in school programs and services. The questionnaire solicits information about a student that can be answered by a school administrator using the student's school records.

6. The Library Questionnaire

The 1993-94 SASS included, for the first time, a supplemental Library Survey. The supplement consists of two questionnaires -- one focusing on the library and media equipment and services made available to students and the other focusing on the qualifications and working conditions of the school library media specialist/librarian. Both surveys were sent to public schools, private schools, and BIA schools (SASS and PSS Questionnaires 1993-94, 1994).

7. Teacher Follow-up Survey

The TFS is a follow-up of selected teachers from the SASS Teacher Survey and is conducted in the school year following SASS (i.e., 1988-89, 1991-92, 1994-95). These questionnaires included a version for continuing teachers and a separate version for those who had left the teaching profession. In addition to questions about employment and teaching status and about possible sources of dissatisfaction with teaching as a profession, the questionnaires included questions about family size and income. Data derived from the TFS allow for comparative analysis of public and private school teacher job

satisfaction and movement within and out of the teaching profession (SASS and PSS Questionnaires 1990-91, 1994).

Some changes to TFS wording and item order has occurred between each of the cycles (1988-89 to 1991-92 and 1992 to 1994-95). Additionally, a new section was added in the 1994-95 questionnaire to current teachers to collect data on teaching methods (Items 31-50). (Whitener et al, Characteristics of Stayers, Movers, and Leavers: Results from the Teacher Follow-up Survey: 1994-95, 1997, p. 45)

References

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III. Ensuring Valid Data, Survey Response Rates, and Nonresponse Bias

A. NCES and Public User Responsibility

1. NCES Data File Review

NCES program staff have the responsibility of ensuring that a data base is acceptable for public release. Before data files are released to the public, staff in the Special Surveys and Analysis Branch of the Elementary and Secondary Education Statistics Division review the data file for errors associated with the edit, imputation and weighting systems. Frequency counts, bivariate, and multivariate tables are reviewed, and when possible comparisons are made to external sources such as the Common Core of Data (CCD) which contains data on all public schools and the Private School Survey (PSS) which contains data on all private schools (see 1993-94 Schools and Staffing Survey: Data File User's Manual, Volume I: Survey Documentation).

2. Bureau of the Census Edit Procedures

As respondents and field representatives complete the SASS or TFS questionnaires, they return them to the U.S. Bureau of the Census, the data collection and processing agent for these surveys. The questionnaires are reviewed by clerks and are coded to indicate its status - e.g., complete interview, refusal, deceased, school no longer exists. Data from each questionnaire is then edited several times using various procedures to ensure quality. These edits include general clerical edits, preliminary interview status classification, computer pre-edit, computer edit, post-processing edit, race/ethnicity edit, and final interview status edit. For further details of the edit process see 1993-94 SASS: Data File User's Manual, Volume I: Survey Documentation.

The validity of the skip patterns in the questionnaire was established for

each SASS questionnaire during the processing of the data; that is, Bureau of the Census analysts verified that each item in the questionnaire had the number of responses it should have if skip instructions were followed correctly. Quality checks on the edit specifications were performed and resulted in some corrections (which were treated as a form of imputation).

Univariate, bivariate, and multivariate tabulations of key survey variables were obtained and compared to estimates from other data sources such as the previous SASS cycle and the CCD in *Schools and Staffing in the United States*:

Selected data for *Public and Private Schools, 1993-94* (NCES 95-191). Tabulations were reviewed to determine whether the basic relationships observed were within reasonable bounds, allowing for elements of change (such as random fluctuations in variance, or a trend such as overall population growth in a state).

3. User Edit Procedures

While the data quality checks described above were performed for each SASS and TFS data file in each survey cycle, it is useful for the researcher to review the files on the CD-ROM and to perform some preliminary analysis and programming runs to verify that the CD-ROM contains the appropriate data files and that these data files are clean. As he or she begins each new analysis, the following steps may provide a useful starting point:

- o check the contents of the directories on the CD-ROM with the documentation to insure that all of the required files are available.
- o run some simple frequencies of the data and compare the results with those shown in the user's manuals or ECB.
- o verify that the final weights contained on the data files allow replication of the weighted frequencies found in the user's manual or ECB.

Human or electronic error in the processing of the data files is possible. Entire files or variables may have been inadvertently omitted in the process. Any inconsistencies should be reported by e-mail to sassdata@ed.gov.

When performing any analysis using SASS or TFS data, it is important to keep in mind that even though the data has been thoroughly checked for errors, some errors such as nonresponse bias and sampling errors are inherent in the survey procedure. For example, some respondents:

- o did not respond to entire instruments;

- o skipped individual items;
- o made illegal skips in the questionnaire response patterns;
- o responded outside of valid ranges.

The imputation of missing items may also add bias to the estimates.

As researchers build their analyses, asking the following questions may help them to focus their quality control efforts:

- o Are the cases selected representative of the population addressed?
- o How do the various breakdowns of the data compare to known population numbers?
- o Are the sample sizes large enough to produce reliable population estimates?

B. Response Rates and Potential Nonresponse Bias

Survey, or unit, response rates reflect the participation rates of eligible respondents. Unweighted response rates give the direct percentage of sampled participants to the eligible sample, while the weighted response rates add in the effects of differing rates of sample selection. These response rates are useful as an indication of possible nonresponse bias. For the SASS and TFS the overall unit response rates are high:

o public school districts	93.9% (weighted)
o public school principals	96.6% (weighted)
o public schools	92.3% (weighted)
o public school teachers	88.2% (weighted)
o private school principals	87.6% (weighted)
o private schools	83.2% (weighted)
o private school teachers	80.2% (weighted)

The high overall response rates mitigate much of the problem of nonresponse bias in these survey data. Furthermore, SASS and TFS, like most large-scale surveys, apply a weighting adjustment in an attempt to reduce nonresponse bias. The response rates are useful as an indication of possible nonresponse bias. Tables in The 1993-94 Schools and Staffing Survey: Data File Users Manual, Vol. I, Survey Documentation (NCES 94-142) provide weighted and unweighted response rates. Chapter VI: "Response Rates" in the 1993-94 Schools and Staffing Survey, Data File User's Manual, Vol. I (p.65) also discusses the derivation of weighted and unweighted response rates and calculations for specific survey instruments. Nonresponse rates are also discussed in An Analysis of Nonresponse in 1993-94 SASS (NCES 97-452).

Due to the enormous cost of surveying the entire population of schools, teachers, or principals, a sample is selected to represent the entire population. For example, one sampled teacher's questionnaire responses

are used to estimate several other non-sampled teacher's questionnaire responses. If a sampled teacher does not respond to the questionnaire, then her/his nonresponse impacts the estimation of all the other teachers represented by the sampled teacher. The impact on the population estimations could be minimal if the responding and nonresponding sampled teachers are identical. This is usually not the case. The impact on population estimation is called nonresponse bias.

Nonresponse bias may affect the validity of the results of specific analyses. Any nonresponse can be problematic. It should be pointed out, however, that nonresponse rates might be particularly high for certain small subgroups and for some particular variables. For such cases, nonresponse bias might be a more serious problem. Item nonresponse introduces a further potential for bias, and may occur for various reasons that relate to the nature of the item (factual vs. opinion), to skip patterns in the questionnaire (wrong paths taken), or to the placement of items at the beginning or end of the questionnaire (some individuals do not reach the end of questionnaire).

Resources

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IV. Confidentiality: Public and Restricted Use Files

The Schools and Staffing Survey (SASS) and the Teacher Follow-up Survey (TFS) facilitate comparison between public and private schools and allows linkages of teachers, schools, school districts, and administrators data. They are cross-sectional surveys with TFS being a subset of the SASS Teacher survey. Many of the data elements are consistent across the cycles, allowing for examination of trends over the decade. Where item wording has been modified from cycle to cycle, crosswalks have been constructed for both the SASS and TFS. These crosswalks can be found in appendix A of this manual, and in the 1993-94 SASS: Data File User's Manual, Volume I: Survey Documentation, NCES 96-142, and the TFS Data File User's Manual, forthcoming.

A. Confidentiality

SASS and TFS data are released in accordance with the provisions of the National Education Statistics Act of 1994 (NESA) [20-USC 1221e-1]. NESA ensures privacy by ensuring that respondents will never be individually identified.

Under Public Law 103-382, NCES is responsible for protecting the confidentiality of individual respondents and releases data to the public to use for statistical purposes only. Record matching or deductive disclosure by any user is prohibited.

To ensure that the confidentiality provisions contained in PL 103-382 have been fully implemented, procedures for disclosure avoidance were used in preparing public-use data for release. Every effort has been made to provide the maximum research information that is consistent with reasonable confidentiality protections.

To prevent disclosure of the identities of teachers, principals

(administrators), and schools on the public-use data files, state identifiers (for the public school teachers, principals [administrators]), and schools and state, regional and detailed affiliations and associations (for private schools, teachers, and administrators) have been removed. In addition, continuous variables on the questionnaire that would permit disclosure of a teacher's identity (age and salary) have been coded into categories. The new categories for recoded variables are defined for the appropriate source codes in the 1993-94 SASS Data File User's Manual. A few items have been deleted from the files altogether because of disclosure problems. The recoded variables are discussed in further detail in section V of this manual. Restrictions are applied to those survey linkages which allow identification of data elements in order to protect the confidentiality of schools and respondents. These are described under Public-use Data Files.

B. Public- and Restricted-use File Differences

The public use data are made available in an abridged form to researchers and the general public. Identification elements on these public-use tapes and CD-ROMs are coded or deleted to protect the confidentiality of survey participants. Researchers who meet a set of qualifications described below may obtain restricted-use data.

Note that public-use and restricted-use data files are not to be confused with public and private schools, which are subsets (surveys) of SASS and TFS, from which data files are created.

Public-use Data Files

SASS: The public-use data include Census region codes which are defined in the codebooks and based upon the physical location of the school. State codes, however, were suppressed to prevent their use for state-level data.

The school control number (SCHCNTL) may be used to link the various data sets.

File linking is described further in this section and SAS program examples are given in a later section of this manual. This allows the School file to be linked with the Administrator and Teacher files without state identification.

To maintain confidentiality of survey respondents, the Teacher Demand and Shortage file cannot be linked to other public-use files.

The Teacher Demand and Shortage file for public schools is separated into two

parts: demand and shortage data and district policy information. The demand and shortage data are contained on a separate file which is unlinked and unmasked. The district policy information was attached to school records and, thus, allows linkage with school, principal, and teacher information.

The nine-category typology for private schools is broken down into three primary divisions and subdivided into three additional groups:

Catholic

- Parochial
- Diocesan
- Private Order

Other Religious

- Conservative Christian
- Affiliated with a national denomination or other religious school association
- Unaffiliated

Non-sectarian

- Regular program
- Special emphasis
- Special Education.

On the School, Administrator, and Teacher files, continuous variables that would permit disclosure of school, teacher, or administrator identity have been collapsed into categories. On the School file, for example, enrollment, number of teachers, community type, percent minority enrollment, and school level were collapsed into categories. On the Administrator and Teacher files, income and age have been collapsed into categories (see chapter V).

Some categorical variables that posed a disclosure problem have been recoded into new categories. A few items have been deleted from the files altogether because of disclosure problems. For example, the school names and addresses have been deleted from the file to protect the identity of individual schools.

TFS: To prevent disclosure of the identities of teachers on the public-use data files, state, regional, and detailed affiliations and associations (for private school teachers and administrators) have been suppressed. In addition, continuous variables on the questionnaire which would permit disclosure of a teacher's identity (age and salary) have been coded into categories. A few items have been deleted from the files altogether because of disclosure constraints.

Restricted-use Files

Restricted-use files do not have the same data restrictions as the public-use files. The restricted-use files contain state codes, therefore state

analyses
are possible with restricted data. Individual's data such as specific
salary
or race which are not on the public-use files are included on the
restricted-use files. Researchers who can demonstrate a need for more
detailed information than what is on public-files may request access to
restricted-use data files. The restricted-use files contain
identification
codes that facilitate linkage between all surveys for statistical
research
purposes.

Researchers requesting access to the restricted-use files must obtain a
license to use these data by providing the following information:

- o the title of the survey to which access is required;
- o detailed discussion of the statistical research project;
- o the name and title of the most senior official having authority
to bind
the organization to the provisions of the license agreement;
- o the name and title of the principal project officer who will
oversee
the daily operations;
- o the phone number, name(s), and title(s) of professional and
technical
staff who will have access to the survey data;
- o the estimated loan period required for accessing the survey
data;
- o the desired media format and conversion (e.g., 9-track tape, CD-
ROM,
ASCII, EBCDIC).

Return all of the above information to:

Statistical Standards and Services Group
NCES/OERI
U.S. Department of Education
555 New Jersey Avenue, N.W.
Washington, D.C. 20208

The Associate Commissioner for Statistical Standards and Methodology
will
review the information submitted and inform the requester whether a
license to
use the restricted data is approved.

Created Variables

Several analysis variables were added to both public-use and restricted-
use
data files (unless otherwise noted) for data users' convenience. The
created
variables are included in the 1993-94 SASS: Data File User's Manual,
Vol. I
and in chapter V of this manual.

Types of analyses on Public-use or Restricted-use Files

The public-use and restricted-use files differ as explained in the
previous
sections. The public-use files are available to anyone in the general

public
such as students, parents, teachers, reporters, lawyers, government
officials
and anyone else interested in the information. Access to restricted-use
files
is regulated by the Department of Education as described previously.
The
restricted-use files are used only by researchers that have a
demonstrated
need for the more detailed information included in the restricted-use
files.

Because of the differences in available data, analyses that can be
performed
with appropriate restricted-use files can not always be done with public
use
files. For example, a researcher who wants to calculate the mean
number, age,
or income of teachers surveyed in school year 1993-94 needs access to
restricted-use files. The public-use files contain categorized values
for
total number of teachers, their ages and incomes while the restricted-
use
files contain specific values for number of teachers, age and income.
Likewise values for school enrollment and percent minority enrollment
are
reported as values on the restricted-use files and as categorized values
on
the public-use files.

Another difference, mentioned in a previous section, is that the public-
use
files does not contain state codes. This means that analyses at the
state
level can only be done with restricted-use files. Analyses on public-
use
files can be done at the national level or by Census regions.

The restricted-use files also contain school district control numbers.
This
means a researcher can perform analyses by school districts, for example
estimating the average teacher class size for each school district.
That is
not possible with the public-use files.

C. File Linkage within a SASS Cycle

This is a general discussion of file linkage, for a more detailed
discussion
and examples see the section VI Selecting variables for working data
files.

When each school was selected for the Public and Private School Survey
samples, its principal was also selected for the Principal Survey and a
sample
of teachers at that school was selected for the Teacher Survey. For
public
schools, the school district, or local education agency (LEA), with
jurisdiction over the sample school was selected for the Teacher Demand
and

Shortage Survey.

On the restricted-use files, each school can be linked to the records for its principal and sample teachers by SCHCNTL (school control number) which was added to each appropriate record. The records for school districts on the Teacher Demand and Shortage Survey file can be linked to the public schools, principals, and teachers using the variable LEACNTL (school district control number) which was added to each appropriate record.

Each school can be linked to the public-use file records for its principal and sample teachers by SCHCNTL. However, the records for school districts on the Teacher Demand and Shortage Survey file cannot be linked to the public schools, principals, or teachers to protect the confidentiality of individual schools, principals, and teachers. The files cannot be linked because the district identification (LEACNTL) has been dropped from the school, principal, and teacher files.

With restricted-use files, the school and district can be linked to the appropriate Student Record, Library/Library Media Center, and Library Media Specialist/Librarian records. The linking variables are:

LEACNTL (Local education agency [LEA] Control Number);
SCHCNTL (School Control Number).

On the public use files, each school can be linked by the variable SCHCNTL to the records for its:

Principal*
Teacher [linked to] TFS
Library Media Center
Library Media Specialist/Librarian
Student Records

* In 1987-88 and in 1990-91 the survey instrument was titled .School Administrator Questionnaire., although the respondents were defined as principals or heads of the school.

For example, to attach Library Media Center records to the school records, use SCHCNTL from the LIBLMC file and school file to find the appropriate school. Or, to attach Library Media Center (LIBLMC) files to Principal (ADMIN) to research principals, use SCHCNTL.

On the TFS, it would not be necessary to link from TFS to the teacher file to obtain data. All data from the SASS teacher file are attached to the appropriate TFS records.

D. How to Merge the Files

There are some merging restrictions for public-use versions of the SASS and TFS. The records for school districts on the Teacher Demand and Shortage Survey file cannot be linked to the public schools, principals, teachers (or in 1993-94 the student, LIBLMS, or LIBLMC files). The variable SCHCNTL has been changed to protect the confidentiality of individual schools, principals, and teachers.

Treatment of the Student Records File

The Student Records File is a restricted-use file only. Using SCHCNTL, this file can be merged with the other restricted-use files by licensed users for analysis purposes, if desired. For specific examples of merging, see Chapter VI: Selecting Variables for Working Files, in this manual.

E. Linking SASS to TFS

The TFS is a survey of elementary and secondary school teachers who participated in SASS and linkages between SASS and TFS are built into the survey design. The TFS is conducted in the school year following the SASS data collection. The TFS sample consisted of all who left teaching within the year after SASS and a subsample of those who continued teaching.

TFS Sample Selection

The samples for the TFS surveys consist of the following within each public TFS stratum: Teachers who responded to the SASS Teacher Surveys were sorted by subject taught by teacher, Census region, urbanicity, school enrollment, and SASS teacher control number. Within each private school TFS stratum (list frame and area frame), responding SASS teachers were sorted by subject taught by teacher, association membership (list frame), affiliation (area frame), urbanicity, school enrollment and SASS teacher control number.

F. User Notes and Comments in Linking TFS and SASS

When the TFS file is delivered to NCES by Census, the original SASS teacher

record is attached to the TFS record. Therefore, analysis can be done on the TFS teacher who left teaching, but taught in an inner-city school for the SASS year using SASS variables as well as TFS variables. This is a rich opportunity to evaluate both the teacher variables and the TFS variables for a teacher who left teaching, moved from one school to another, or stayed at the same school they were in for the SASS survey.

For all three cycles of TFS, the following variables are added to the TFS records from the SASS teacher record:

SECTOR: Public or private school flag.
LOCALE: Community type, based upon the Census definition of central city, urban, and rural.
TYPOLOGY: Nine level grouping of private school religious orientation.
REGION: Census region - Northeast, Midwest, South, or West.
SCHLEVEL: School reported grade levels - Elementary, Secondary, or Combined.
LEVEL: Level of student teacher teaches - Elementary or Secondary.
ENRK12UG: School enrollment.
NMINENR: Number of minority enrollment.
PMINENR: Percent minority enrollment.
NMINTCH: Number of minority teachers.
PMINTCH: Percent minority teachers.
HIDEG: Highest degree earned.
AGE: Age of teacher.

Resources

Gruber, Kerry J., Rohr, Carol L., and Fondelier, Sharon E. 1993-94 Schools and Staffing Survey: Data File User's Manual, Volume I: Survey Documentation. NCES 96-142. Washington D.C.: U.S. Department of Education. National Center for Education Statistics, 1996. Whitener, Summer D., Gruber, Kerry J., Lynch, Hilda, Tingos, Kathryn, Perona, Mia, and Fondelier, Sharon E. Schools and Staffing Survey, Characteristics of Stayers, Movers, and Leavers: Results from the Teacher Follow-up Survey: 1994-95. NCES 97-450. Washington, D.C.: U.S. Department of Education. National Center for Education Statistics, 1997.

V. Created Variables on the Public- and Restricted-use Data Files

1. School control number (SCHCNTL): Principal, Teacher, School, Student, Library Media Center, and Library Media Specialist/Librarian files

The school control number (SCHCNTL) is on the School file and is added to the Principal, Teacher, Student, Library Media Center, and Library Media Specialist/Librarian files. The SCHCNTL is used to link principals with

their school or teachers with their school. Note: SCHCNTL is unique on the School and Principal files. However, there will be many teachers in one school with the same SCHCNTL on the Teacher file. The number of schools will not equal the number of principals or the number of teachers.

Confidentiality procedures implemented for public-use teacher file: control number masked.

2. School district control number (LEACNTL): Public School Restricted-Use files (Principal, Teacher, School, Student, Library Media Center, and Library Media Specialist/Librarian)

The public school district control number (LEACNTL) is on the School District file and is added to the Public School, Principal, Teacher, Student, Library Media Center, and Library Media Specialist/Librarian files. The LEACNTL is used to link Public Schools, Principals, and Teachers with their School District. Note: LEACNTL is unique on the District file. However, there will be many schools, principals, and teachers in one school district with the same LEACNTL.

Confidentiality procedures implemented for public-use file: school district number suppressed.

3. School level (SCHLEVEL): Principal, Teacher, School, Student, Library Media Center, and Library Media Specialist/Librarian files

School level is defined as elementary, secondary, or combined, where a combined school has some elementary and some secondary grades. The following definition of school level was used to determine a consistent school level, and replaces the self-assigned school level:

- o Elementary if the school has only grades below 8th grade;
- o Secondary if the school has grades between 7th and 12th;
- o Combined if the school has any other combination of grades.

Two examples of a combined school level are 4-8 and 5-12. Secondary schools can have any combination of grades between 7th and 12th grade.

Confidentiality procedures implemented for public-use file: no change.

4. Type of private school (TYPOLOGY) - Principal, Teacher, School,

Student,
Library Media Center, and Library Media Specialist/Librarian files

There is a wide diversity among private schools, between types of religiously-oriented schools, Non-sectarian and special-purpose schools. NCES

has adopted a nine-level grouping of private schools that reflects this diversity. The nine groupings are: Catholic Parochial, Catholic Diocesan, Catholic private order, Conservative Christian, other religious denomination-affiliated, other religious unaffiliated, Non-sectarian regular program, Non-sectarian special emphasis, and Non-sectarian special education.

Confidentiality procedures implemented for public-use file: no change.

5. 3-Level Affiliation (AFFIL) - Private School Principal, Teacher, School, Student, Library Media Center, and Library Media Specialist/Librarian files

The nine Typology levels are also consolidated into the three major affiliation categories traditionally reported by NCES: Catholic, other Religious, and Non-sectarian. Typology levels 1-3 are the Catholic affiliations, 4-6 are Other religious affiliations, and 7-9 are Non-sectarian affiliations.

Confidentiality procedures implemented for public use file: no change.

6. Community type (LOCALE) - Principal, Teacher, School, Student, Library Media Center, and Library Media Specialist/Librarian files

The community type in which the school operates is based upon the Census definition of community size and its relation to urbanized or rural places of this document. Originally, SASS collected a self-reported variable, but it was subject to misclassification, because respondents tended to report the size of the immediate area without regard to its urban, suburban, or rural status. This self-reported community type has been replaced by one determined from the ZIP code of the school, and matched to the Census community size for that ZIP code. For the 1990-91 and 1993-94 SASS, LOCALE is derived for the public schools by matching to the LOCALE code on the Common Core of Data School file, and is derived for the private schools by copying the algorithm from CCD and applying it to the ZIP codes of private schools.

The community types are: Large city, Mid-size city, Urban fringe of large city, Urban fringe of mid-size city, Large town, Small town, and Rural.

Procedure for public-use file: no change.

7. School's Urbanicity (URBANIC) - Principal, Teacher, School, Student, Library Media Center, and Library Media Specialist/Librarian files

This variable is a recoding of LOCALE:

- o Central city;
- o Urban fringe or Large town;
- o Rural/Small town.

The 7 LOCALE levels are consolidated into 3 major Urbanicity categories reported by NCES: Central City, Urban Fringe, and Rural. LOCALE levels 1 and 2 are central city, 3-5 are urban fringe, and 6 and 7 are rural designations.

This categorization conforms to Bureau of Census' geographic definitions of urbanicity (and OMB's list of Metropolitan Statistical Areas).

Procedure for public-use file: no change.

8. State abbreviation (STATABB) - Principal, Teacher, School, Student, Library Media Center, and Library Media Specialist/Librarian files

This is the abbreviation of the state in which a school is physically located.

This may not be the same as the abbreviation in the mailing address.

Procedure for public-use file: deleted.

9. Size of School District (LEASIZE) - Public School Principal, Teacher, School, Student, Library Media Center, and Library Media Specialist/Librarian files

This is computed by doing a sum of the number of students in the Public School

District (LEA). The number is then categorized:

- 1 = None
- 2 = 1-999
- 3 = 1,000 - 9,999
- 4 = 10,000 - 990,000

Procedure for public-use files: no change.

10. Number of minority teachers (NMINTCH) - Principal, Teacher, School, Student, Library Media Center, and Library Media Specialist/Librarian files

This variable is computed from the SASS teacher race/ethnicity counts.

The

sum of teachers in a school of all racial/ethnic groups other than White is

calculated.

Procedure for public-use files: no change.

11. Percent minority teachers (PMINTCH) - Principal, Teacher, School, Student, Library Media Center, and Library Media Specialist/Librarian files

This variable is computed from the SASS teacher race/ethnicity counts. The sum of teachers of all racial/ethnic groups in a school other than White is calculated as a percentage of teachers in a school of all race/ethnicity groups.

Procedure for public-use files: no change.

12. Number of minority enrollment (NMINENR) - Principal, Teacher, School, Student, Library Media Center, and Library Media Specialist/Librarian files

This variable is computed from the SASS student race/ethnicity counts. The sum of students in a school of all racial/ethnic groups other than White is calculated.

Procedure for public-use files: only on district file.

13. Percent minority enrollment (PMINENR) - Restricted-use files (Principal, Teacher, School, Student, Library Media Center, and Library Media Specialist/Librarian files)

This variable is computed from the SASS student race/ethnicity counts. The sum of students in a school of all racial/ethnic groups other than White is calculated as a percentage of students in a school of all race/ethnicity groups.

Percent minority enrollment (PMINENR) - Public-use files (Principal, Teacher, School, Student, Library Media Center, and Library Media Specialist/Librarian).

The Restricted-use values were categorized for the Public-use files as follows:

1. 0 - 4 percent;
2. 5 - 19 percent;
3. 20 - 49 percent;
4. 50 - 100 percent.

Procedure for public-use files: categorized.

14. BIA flag (BIA) - Principal and School files

This variable indicates whether a school is a Bureau of Indian Affairs (BIA) school. The Principal at a BIA school is also flagged as BIA.

Procedure for public-use files: no change.

15. School enrollment (ENRK12UG) - Restricted-use files (Principal, Teacher, Student, Library Media Center, and Library Media Specialist/Librarian)

This is variable S0255 on the 1993-94 School file and was placed on the School Principal and Teachers' records.

School enrollment (ENRK12UG) - Public-Use files (Principal Teacher, Student, Library Media Center, and Library Media Specialist/Librarian).

The Restricted-use values were categorized for the Public-Use files as follows:

1. 1 - 149;
2. 150 - 299;
3. 300 - 499;
4. 500 - 749;
5. 750 - 1499;
6. 1500 or greater.

Procedure for public-use files: categorized.

16. Race/ethnicity (RACE_ETH) - Principal and Teacher files

This variable was created by using questions 28a and 29 on the 1993-94 Principal Questionnaire and questions 57a and 58 on the 1993-94 Teacher Questionnaire. If a respondent identifies him/herself as Hispanic, regardless of race (question 29), they are counted as Hispanic. If they are not Hispanic then the other race values are checked (question 28a).

Procedure for public-use files: no change.

17. Age (AGE) - Restricted-use files (Principal and Teacher)

This variable was created by using question 30 on the 1993-94 Principal Questionnaire and question 59 on the 1993-94 Teacher Questionnaire and subtracting the 'Year of Birth' from the second year of the survey.

Age (AGE) - Public-use files (Principal and Teacher)

The Restricted-use values were categorized for the Public-use files as follows:

1. Age under 30;
2. 30 - 39;
3. 40 - 49;
4. 50 and above.

Procedure for public-use files: categorized.

18. Highest degree earned (HIDEG) - Principal and Teacher files

The highest degree earned is a recoding of the various academic degrees received variables into:

0. No degree;
1. Less than or equal to a Bachelor's degree;
2. Master's degree;
3. Above a Master's degree.

Procedure for public-use files: no change.

19. School's program type (PGMTYPE) - Principal, Teacher, Student, Library Media Center, and Library Media Specialist/Librarian files

This is the type of the Principal or Teachers' School as reported by the school.

1. Regular elementary or secondary;
2. Montessori (Private only);
3. Elementary or secondary with a Special Program Emphasis;
4. Special Education - primarily serves students with disabilities;
5. Vocational/Technical;
6. Alternative - offers a curriculum designed to provide alternative or nontraditional education.

Procedure for public-use files: no change.

20. School's tuition (TUITIN) - Private Principal and Teacher files

This is the highest annual tuition charged by the Principal or Teachers' School for a full-time student. This variable was created using question 19c from the 1993-94 SASS Private School Questionnaire.

Procedure for public-use files: no change.

21. Continuing FTE Teachers (CONFTE) - District and Private School files

This variable is created by subtracting the Newly Hired FTE Teachers from the Total FTE Teachers. This reflects the number of teachers who stayed in the teaching profession at the Public School District or Private School being questioned.

Procedure for public-use files: no change.

22. Teaching experience (TCHEXPER) - Principal file only

This variable is created by adding number of years experience as a teacher before becoming a Principal and number of years experience as a teacher after becoming a Principal. This variable was created using question 11a and 11b on the 1993-94 SASS Principal Questionnaire.

Procedure for public-use files: no change.

23. Principal experience (PRNEXPER) - Principal file only

This variable is created by adding experience as a principal at this school and experience as a principal in another school.

Procedure for public-use files: no change.

24. Teaching experience (TOTEXPER) - Teacher file only

This variable is created by adding a teacher's years of experience as a full-time and/or part-time teacher for both Public and Private schools (sum of responses to questions 9a, 9b, 10a, and 10b).

Procedure for public-use files: no change.

25. Teaching Level (LEVEL) - Teacher file only

Grade level which the teacher was teaching:
Elementary
Secondary

Procedure for public-use files: no change.

26. Urbanicity Codes for Public School Districts - Restricted-use file only (TDS)

As LOCALE codes have not been developed for districts, several other geographic identifiers are included on the restricted-use file only for research purposes. These identifiers are:

a. State and County FIPS code (STCNTY) - The standardized FIPS code for a county, combined with the FIPS code for the State. This five-digit code can be looked up in the FIPS publication cited in the User's Notes (see Section XVI of the 1993-94 Data File User's Manual).

b. CMSA code (CMSA) - This four-digit code identifies the specific metropolitan statistical area as defined by OMB and can also be looked up in another FIPS guide. MSAs are areas with at least 50,000 people or with more than one city with population totaling at least 50,000. There is no

code for

non-MSA districts. c. Metropolitan status code (METRO) - This is a categorical variable, assigned to every district relative to its metropolitan status:

1. Urban area, primarily inside central city;
2. Urban area, primarily outside central city;
3. Non-urban area.

This variable is on the Common Core of Data file and assigned by NCES.

Procedure for public-use files: no change.

27. Total number of teachers (TOTTEACH) - Public-use School files

This variable is created by adding the total number of full-time and part-time teachers on the Public School file (questions 16g and 17g on the 1993-94 SASS Public School Questionnaire) and by renaming Total Teachers (question 23 on the 1993-94 SASS Private School Questionnaire) on the Private School file.

The number is then categorized for the Public-Use files as follows:

Public Schools:

1. 0 to less than 25
2. 25 to less than 35
3. 35 to less than 45
4. 5 or greater

Private Schools:

1. 0 to less than 5
2. 5 to less than 10
3. 10 to less than 15
4. 15 or greater.

Recommended Categorization of School Size and Teacher Experience

1. School size - Public-use School file

School enrollment for public and private schools is categorized by the variable ENRK12UG as described earlier in this section.. Since public schools generally have a larger enrollment than private schools several NCES publications have used a different categorization of public school total enrollment. The following is the suggested categorization of the total enrollment in public schools:

1. 1 - 149 students;
2. 150 - 499 students;
3. 500 - 749 students;
4. 750 students or greater.

2. New Teacher or Experienced Teacher (TNEWID) - Public-use and Restricted-use Teacher files

"New" teachers are defined as having taught for 3 years or less, either in the public or private schools. This variable is defined prior to obtaining the teacher data, by the school's principal on the Teacher Listing form.

Procedure for public-use files: no change.

VI. Selecting Variables for Working Data Files

A. Developing a Model with Available Data

The researcher is ready to begin selecting variables for his/her working data files after a thorough review has been completed to understand:

- o how the SASS and TFS data were collected and processed;
- o how to avoid the common problems in data file preparation;
- o data limitations and file preparation;
- o research issues that can be addressed.

Through checking the data and gaining a greater working understanding of the data at the beginning of the research, the researcher also may save both time and money.

Before building a working data set the conceptual model must be developed.

This is accomplished through consideration and analysis of previous research and the associate conditions. To do this the researcher should:

- o Develop a conceptual model or theory -- What does prior research suggest is happening (e.g., what conditions are associated with teacher satisfaction)?
- o Choose the predictor variables (e.g., urbanicity) and outcomes (e.g., violence in school) that are most closely related to your theory.
- o Determine which components (variables) of the model can be addressed with SASS and TFS variables. If there are multiple sources of data (e.g., teachers, schools, etc.) available on the SASS and TFS data files, choose the variables that you believe are most reliable, valid and appropriate (it is more reliable to analyze teacher characteristics using the teacher file rather than the school file).
- o Rethink the original model. If the variables contained on the SASS and TFS files cannot be used in the original model, rethink the model and either modify the model, or choose another data set. (Owings, Quinn, A guide to using NELS:88 Data, 1994, p. 23)

B. Avoiding Common Problems in File Preparation

Subsetting a File

Each component within SASS is a distinct file on the CD-ROM: districts, public school principals, private school principals, public schools, private schools, public school teachers, and private school teachers. Codebooks for each component include both the public- and restricted-use versions of the files. In addition, on the restricted-use school file and, to a lesser extent, on the public-use file, district records are combined with school records. In order to perform an analysis on one component without extraneous "noise" from other components, the programmer or researcher has to subset the file by the variable SECTOR. For example, using the Statistical Analysis System (SAS) language, the following commands would be necessary in the DATA step to retain data for public teachers [only]:

```
o      * PC-SAS version *;  
o      INFILE `c:\mydata\tchpgm.sas'; * read in stored output file from  
CD-ROM;  
o      DATA TEACHERS; * start of analysis program;  
o      IF SECTOR=1; * keeps only public school  
teachers;
```

Using Correct Selection Criteria

If you are interested in public school teachers whose school district required community service for students in the class of 1994, use the LEACNTL variable to match the teacher with the district file. At this point the analysis could go either of several ways: (1) select only teachers whose district responded, or (2) select all teachers regardless of whether you have school district data for them. The first option is used when you are primarily interested in the requirement of community service. The second option is for times when other teacher variables are needed for your analysis and the community involvement is only one of several characteristics being reviewed.

In the first instance, where only teachers whose district responded are desired, code similar to the following should be used when merging the district data onto the teacher file:

```
o      DATA MERGED;  
o      MERGE TEACHER (IN=A) DISTRICT (IN=B);  
o      BY LEACNTL;
```

```
o IF A AND B; *(this code pulls only teachers who have a matching
district
  record all other teachers will be dropped);
o RUN;
```

In the second instance, when all teachers are desired whether their district responded or not, code similar to the following should be used to merge the district data onto the teacher file:

```
o DATA MERGED;
o MERGE TEACHER (IN=A) DISTRICT (IN=B);
o BY LEACNTL;
o IF A; (this code pulls ALL teachers onto the file while merging the
district data onto those teachers within the district -- no teachers
will
  be dropped);
o RUN;
```

If analyzing the teacher file and questions arise whether to use SCHLEVEL or LEVEL, consider the focus of the objective of the analysis: is it the type of school in which the teacher teaches, or the grade level(s) the teacher teaches? If focusing on the percentage of teachers in secondary schools, use SCHLEVEL. However, if focusing on the percentage of teachers teaching seventh through twelfth, use LEVEL.

How to Merge the Files

For all three cycles of the public use version of the SASS data there are some merging restrictions. The records for school districts on the Teacher Demand and Shortage Survey file cannot be linked to the public schools, principals, teachers (or in 1993-94 the student, LIBLMS, or LIBLMC files). The variable SCHCNTL has been changed to protect the confidentiality of individual schools, principals, and teachers. District policy data are already included on the school, principal and teacher files to allow more general types of analysis without compromising confidentiality of respondents.

Treatment of BIA Schools

Data on BIA schools, principals, and teachers were not included on public-use data files because the risk of identifying an individual school was too high (the universe of BIA schools was sampled). Instead, the data are released on a separate restricted-use file. The restricted-use BIA data file can be merged with other restricted-use files by licensed users for analysis

purposes, if desired.

Treatment of the Student File

The Student File is not included on the SASS and TFS CD-ROM. It is on a separate restricted-use file only. This file can be merged with the other restricted-use files by licensed users for analysis purposes, if desired.

Caution about Merging Files

When merging SASS files, such as school and teacher, the researcher must realize that the individual files do not contain the same number of cases.

There is one principal selected for every school in the sample, and there are multiple teachers selected for every school in the sample (generally a minimum of 3, but the exact number depends upon the size of the school).

Differences

in response rates for each component result in an unequal number of (unweighted) cases between the two files. This is most easily confirmed by

checking the unweighted frequencies that are listed in the codebooks for each

component. Individual principals, schools, and teachers may have declined to

participate in the survey, or there may be respondent teachers in a school

that refused to participate. Thus, when merging two SASS files together, such

as the teacher and school, disproportionality may occur when clusters of teachers who work at schools that did not complete school questionnaires are

eliminated from further analysis because of missing school data. The same may

be said about the principal and school files, as the principal questionnaire

had a higher response rate than the school questionnaire. Restricted file

users should also note that there are public schools with no corresponding

district (LEA) record. These districts refused to participate.

C. Subgroup Analysis

Due to the small national percentage of racial and ethnic minorities (especially Native Americans), SASS and TFS oversample to facilitate analysis

of these groups. Standard errors for these groups remain high, but reliable

estimates are still possible for some subsets. Caution should be used when

filtering to specific groups (e.g., Asian female teachers between the ages of

50 and 65), cell sizes may not be sufficient. These racial/ethnic subgroups

were not only over sampled in the SASS base year, but also were disproportionately retained in the TFS.

D. Variables to Use with Caution

Some of the variables included in SASS and TFS need to be used with caution.

(One example of a variable to use with caution is Grade Point Average [GPA] on the student file.) High item non-response may indicate a biased estimate.

Consult An Analysis of Nonresponse in the 1993-94 SASS and the 1993-94 Schools and Staffing Survey: Data File User's Manual, Volume I: Survey Documentation for item response rate tables for each of the variables on each of the 1993-94 SASS files.

Variability increases with the subsetting of the files. NCES suggests the careful scrutiny of both the standard errors and the coefficients of variation (c.v.) of an estimate especially when analyzing rare populations (e.g., Native American teachers by school size).

Resources

Gruber, Kerry. An Analysis of Nonresponse in 1993-94 SASS. NCES 97-452. Washington, D.C.: U.S. Department of Education. National Center for Education Statistics, forthcoming.

Gruber, Kerry J., Rohr, Carol L., and Fondelier, Sharon E. 1993-94 Schools and Staffing Survey: Data File User's Manual, Volume I: Survey Documentation. NCES 96-142. Washington D.C.: U.S. Department of Education. National Center for Education Statistics, 1996.

Owens, Jeff, and et al. A Guide to Using NELS:88 Data. Washington, D.C.: U.S. Department of Education. National Center for Education Statistics, 1994

VII. Examples of Programming Process for SASS Data

The following example generates frequency tables using SASS 1990-91 Public and Private School Teacher files. This example demonstrates the programming process for analysis of 1990-91 public and private school teachers by grade level of students and by the teacher's racial/ethnic background. The programming code is in SAS and reads from an ASCII-formatted file which can be

found on the CD-ROM. Please note that the infile and input statements should be altered depending on the location of the files and the variable positions indicated within the Electronic Codebook (ECB).

SAS CODE:

```
/* --- read in the public school teacher file. --
- */
DATA PUBTCH;
    INFILE `E:\SASS90\PUBTCH.DAT' LRECL=1024 PAD;
INPUT  SECTOR  40-40  TCHWGT  46-61 /
        LEVEL   302-302  RACE_ETH 352-352;

/* --- read in the private school teacher file. --
- */
DATA PRIVTCH;
    INFILE `E:\SASS90\PRIVTCH.DAT' LRECL=1024 PAD;
INPUT  SECTOR  40-40  TCHWGT  46-61 /
        LEVEL   302-302  RACE_ETH 352-352;

/* --- set these two files into one with public and private school
- */
DATA TEACHER;
    SET PUBTCH PRIVTCH;

/* --- create the labels for the output file and tables. --
- */
LABEL
    SECTOR=' School teachers'
    LEVEL=' Level of students teacher teaches'
    RACE_ETH=' Teacher's race/ethnicity' ;

/* --- create formats for the output file and tables. --
- */
PROC FORMAT;
    VALUE SECTOR_F    1='Public'
                    2='Private';
    VALUE LEVEL_F     1='Elementary'
                    2='Secondary';
    VALUE RC_ETH      1='American Indian or Alaska Native'
                    2='Asian or Pacific Islander'
                    3='Black, non-Hispanic'
                    4='White, non-Hispanic'
                    5='Hispanic';

/* --- sort the file by public or private school sector. --
- */
PROC SORT DATA=TEACHER;
    BY SECTOR;

/* --- generate nationally representative or weighted frequency
- */
counts of; public and private school teachers by level and
race/ethnicity. --
- */
PROC FREQ DATA=TEACHER;
BY SECTOR;
FORMAT
    SECTOR SECTOR_F. LEVEL LEVEL_F. RACE_ETH RC_ETH.;
```

TABLES

```

        LEVEL*RACE_ETH;
WEIGHT TCHWGT;
RUN;

```

OUTPUT:

Public Use files should output the following tables.

	Public School Teachers				
	American Indian or Alaska Native	Asian or Pacific Islander	Black Non- Hispanic	White Non- Hispanic	
Hispanic					
Elementary	11,648	16,788	133,012	1,272,497	54,515
Secondary	6,480	7,652	56,946	770,935	26,008

	Private School Teachers				
	American Indian or Alaska Native	Asian or Pacific Islander	Black Non- Hispanic	White Non- Hispanic	
Hispanic					
Elementary	529	2,284	5,623	139,405	5,224
Secondary	287	634	1,009	55,618	2,320

The next example demonstrates how to merge files when you want to use data from more than one component, e.g. data from SASS 1993-94 public schools and public school principals files.

SAS CODE:

```

/* --- read in the public schools file.          --
- */
DATA SCHOOLS;
    INFILE `E:\DATA\PUBLSCHL.DAT' LRECL=1024 PAD;
    INPUT  SCHCNTL $ 11-19 / ;
    /* include any other variables of
interest */

/* --- read in the public school principals file.  --
- */
DATA PRINCIPL;
    INFILE `E:\DATA\PUBLADM.DAT' LRECL=1024 PAD;
    INPUT  SCHCNTL $ 11-19 / ;
    /* include any other variables of
interest */

/* --- files must be sorted in ascending order by the variable used
for merging, sort both files by school control variable.  --
- */
PROC SORT DATA=SCHOOLS;
BY SCHCNTL;
PROC SORT DATA=PRINCIPL;
BY SCHCNTL;

```

```

/* --- merge schools and principals files (keep only matches).  --
- */
DATA MERGED;
MERGE SCHOOLS (IN=A) PRINCIPL (IN=B);
BY SCHCNTL;
IF A AND B;
RUN;

```

The resulting data set "MERGED" contains data for each school that has a matching principal record. Any school that does not have a matching record in the principals file will be dropped. If you want to keep all the schools whether or not there exists matching principal data you can use the following SAS code:

```

/* --- merge schools and principals files (keep ALL school
records).  --
- */
DATA MERGED;
MERGE SCHOOLS (IN=A) PRINCIPL (IN=B);
BY SCHCNTL;
IF A;
RUN;

```

Conversely, if you are interested in principal data regardless of the availability of school data, you can use the following:

```

/* --- merge schools and principals files (keep ALL principal
records).  --
- */
DATA MERGED;
MERGE SCHOOLS (IN=A) PRINCIPL (IN=B);
BY SCHCNTL;
IF B;
RUN;

```

Next is an example of how to subset data and generate average values of a variable within desired categories. Using SASS 1993-94 public teacher file, the following SAS code will calculate the average academic year base salary of full-time teachers within each race/ethnicity.

SAS CODE:

```

/* --- read in the public teachers file.  --
- */
DATA TEACHERS;
    INFILE `E:\DATA\PUBLTCH.DAT' LRECL=1024 PAD;
    INPUT TCHWGT 29-44 T0020 813-814 /
          T1420 215-215 RACE_ETH 275-275;

/* --- create the labels for the output file and tables.  --
- */

```

```

LABEL
TCHWGT='Teacher Final Weight.'
T0020='Classify your main assignment'
T1420='Academic year base salary'
RACE_ETH='Teacher^s race/ethnicity';

/* --- keep only full-time teachers (T0020=1). --
- */
IF T0020=1;

/* --- create formats for the output file and tables. --
- */
PROC FORMAT;
VALUE RACE ETF      1='American Indian or Alaska Native'
2='Asian or Pacific Islander' 3='Black, not Hispanic'
4='White, not Hispanic' 5='Hispanic';

/* --- calculate average base salaries (VAR T1420),
for each race/ethnicity (CLASS RACE_ETH) and
weight by teacher final weight (WEIGHT TCHWGT) --
- */
PROC MEANS;
VAR T1420;
CLASS RACE_ETH;
WEIGHT TCHWGT;
FORMAT RACE ETN RACE ETF.;
RUN;

```

OUTPUT:

Restricted Use files should output the following table.

Analysis Variable : T1420 Academic year base salary

RACE_ETH	N Obs	N	Mean	Std Dev	Minimum	Maximum
American Indian or Alaska Native	900	900	32983.44	51169.55	0	82000.00
Asian or Pacific Islander	1103	1103	36302.52	46136.65	13000.00	76000.00
Black, not Hispanic	2486	2486	33968.45	77568.56	13260.00	66900.00
White, not Hispanic	36418	36418	34246.88	80435.77	0	85000.00
Hispanic	1682	1682	33113.00	73974.89	9000.00	75116.00

If you want to compare information from the different years the survey was taken, i.e. the survey cycles, you should first check the crosswalk

among items in the 1987-88, 1990-91, and 1993-94 SASS. The crosswalk will tell you which variables from each cycle correspond with variables from the other cycles. The crosswalk can be found in the 1993-94 SASS Data File User's Manual and in Appendix A of this manual.

Once you have identified information that is available in each cycle, you can individually run tables for each cycle as demonstrated in the previous examples. You may also combine the data into one file as described in the following example. This example reads the variables using common names for all three cycles even though the documented variable names differ across cycles. Using common names is done to simplify combining the data and producing tables.

SAS CODE:

```
/* --- read in the 1987-88 public district file. --
- */
DATA DIST87;
    INFILE 'E:\DATA\PUBLEA87.DAT' LRECL=959 PAD;
    INPUT NEWHIRES 197-202 .1 NEWCERTS 203-208 .1
           AMINDIST 368-371 ASIADIST 372-377 HISPDIST 378-383
           BLKDIST 384-389 WHTDIST 390-395
           TCHAMIND 396-398 TCHASIAN 399-402 TCHISPNC 403-406
           TCHBLACK 407-411 TCHWHITE 412-416
           LEAWGT 418-425 .4 REGION 958-958;
/* --- create variable to indicate survey cycle. --
- */
CYCLE=87;
RUN;

/* --- read in the 1990-91 district file. --
- */
DATA DIST90;
    INFILE 'E:\DATA90\DISTRICT.DAT' LRECL=1024 PAD;
    INPUT REGION 14-14 LEAWGT 40-48 .5 /
           NEWHIRES 119-124 .1 NEWCERTS 125-130 .1
           AMINDIST 282-286 ASIADIST 287-292 HISPDIST 293-298
           BLKDIST 299-304 WHTDIST 305-310
           TCHAMIND 311-313 TCHASIAN 314-317 TCHISPNC 318-321
           TCHBLACK 322-326 TCHWHITE 327-331;
/* --- create variable to indicate survey cycle. --
- */
CYCLE=90;
RUN;

/* --- read in the 1993-94 district file. --
- */
DATA DIST93;
    INFILE 'E:\DATA93\DISTRICT.DAT' LRECL=1024 PAD;
    INPUT REGION 22-22 LEAWGT 37-52 .9
           AMINDIST 911-915 ASIADIST 916-921 HISPDIST 922-
927
           BLKDIST 928-933 WHTDIST 934-939
           NEWHIRES 997-1002 NEWCERTS 1003-1008
           TCHAMIND 1019-1021 / TCHASIAN 13-16 TCHISPNC 17-20
           TCHBLACK 21-25 TCHWHITE 26-30;
```

```

/* --- create variable to indicate survey cycle.      --
- */
CYCLE=93;
RUN;

/* --- combine 3 cycles of data into one data set.    --
- */
DATA COMBINED;
    SET DIST87 DIST90 DIST93;

/* --- create the labels for the output file and tables. --
- */
LABEL
    REGION          = 'Region code'
    LEAWGT          = 'District Final Weight'
    NEWHIRES        = 'How many newly hired FTE teachers as of Oct 1'
    NEWCERTS        = 'How many newly hired FTE teachers hold
certification'
    AMINDIST        = 'How many K-12 are American Indian or Alaskan Native'
    ASIADIST        = 'How many K-12 are Asian or Pacific Islander'
    HISPDIST        = 'How many K-12 are Hispanic regardless of race'
    BLKDIST         = 'How many K-12 are Black not of Hispanic origin'
    WHTDIST         = 'How many K-12 are White not of Hispanic origin'
    TCHAMIND        = 'How many district teachers are American Indian or
Alaskan
                    Nat'
    TCHASIAN        = 'How many district teachers are Asian or Pacific
Islander'
    TCHISPNC        = 'How many district teachers are Hispanic regardless
of race'
    TCHBLACK        = 'How many district teachers are Black not of Hispanic
origin'
    TCHWHITE        = 'How many district teachers are White not of Hispanic
origin';
RUN;

/* --- create table of variable average values by survey cycles. --
- */
PROC MEANS DATA=COMBINED;
    CLASS CYCLE;
    VAR  NEWHIRES NEWCERTS AMINDIST ASIADIST HISPDIST
        BLKDIST WHTDIST TCHAMIND TCHASIAN TCHISPNC
        TCHBLACK TCHWHITE;
    WEIGHT LEAWGT;          /* inflates to national population */
RUN;

```

OUTPUT:
Public use files should output the following table (this is only part of the output, it has been edited to fit in this manual).

CYCLE	N Obs	Variable	N	Mean	Std Dev	Minimum
87	6921	NEWHIRES	6921	5.5096257	61.6390993	0
		NEWCERTS	6101	6.1408961	57.1530646	0
		AMINDIST	4826	27.5835464	334.0199543	0
		ASIADIST	4826	73.6677391	2266.02	0
		HISPDIST	4826	256.8140943	7904.62	0
		BLKDIST	4826	434.3921347	8564.72	0
		WHTDIST	4826	1815.84	7804.29	0
		TCHAMIND	4826	0.9712386	17.6144774	0

		TCHASIAN	4826	1.4232543	89.7656203	0
		TCHISPNC	4826	4.9060527	121.2771227	0
		TCHBLACK	4826	15.4861222	326.0286093	0
		TCHWHITE	4826	141.8080585	914.4766709	0
90	4884	NEWHIRES	4884	12.8234973	81.2050238	0
		NEWCERTS	4828	12.1283215	71.7597052	0
		AMINDIST	4884	27.3314039	320.1386972	0
		ASIADIST	4884	84.8820366	2432.64	0
		HISPDIST	4884	305.6265886	8717.50	0
		BLKDIST	4884	419.2187081	8217.17	0
		WHTDIST	4884	1801.52	7695.59	0
		TCHAMIND	4884	0.7635979	11.8310826	0
		TCHASIAN	4884	1.6695195	112.5705021	0
		TCHISPNC	4884	5.0880250	135.4859367	0
		TCHBLACK	4884	15.0370560	329.8237722	0
		TCHWHITE	4884	142.8509784	910.5638030	0
93	4993	NEWHIRES	4993	13.1664549	84.0109133	0
		NEWCERTS	4640	12.9112479	71.8278789	0
		AMINDIST	4993	31.5795844	344.3161579	0
		ASIADIST	4993	101.1354883	2566.29	0
		HISPDIST	4993	347.1661375	8810.48	0
		BLKDIST	4993	457.3992819	7823.56	0
		WHTDIST	4993	1885.35	7658.25	0
		TCHAMIND	4993	0.5885868	6.4086182	0
		TCHASIAN	4993	1.7875893	113.4395705	0
		TCHISPNC	4993	5.9351099	159.6550070	0
		TCHBLACK	4993	14.2940372	286.8844535	0
		TCHWHITE	4993	150.8519606	896.5581207	1.0000000

VIII. Final and Replicate Weights

Final and replicate weights are included on each of the SASS and TFS files.

The final weights are used with the sample data to produce population estimates. The final weights should be multiplied by the survey data to obtain national population estimates. For example there are 9,098 public school principals sampled in 1993-94, which weight up to 79,618 public school principals in the United States. See section VII of this manual for SAS program examples of how the final weight is used. The replicate weights are used to produce standard errors.

The SASS is a stratified random sample with oversampling of rare populations such as minorities. The weights adjust for the sample design, oversampling, and also adjust for inconsistencies between files within a cycle. The unweighted frequencies (and percents) reflect the sample while the weighted frequencies reflect national estimates. Weighted estimates should approximate estimates from other national sources within a level of statistical confidence.

In the SASS 1987-88 TDS (Teacher Demand and Shortage) file on the Restricted Use CD-ROM, there are two sets of replicate weights: REPWTL1-REPWTL48, plus LEAWGTL, for LEA-based analysis, and REPWTS1-REPWTS48, plus LEAWGTS for school-based analysis.

The two LEA weights are needed because, in three states (Delaware, Nevada and West Virginia), some district certainty districts were created after the school sample was selected. Thus, there are no schools or teachers associated with those districts. Under normal circumstances, when performing analysis on the TDS file, a researcher would not have to use the second set of weights. However, because of these three states, if the analysis calls for averaging school, principal or teacher data by LEA and merging that information on the TDS file as part of the analysis using the LEA weight, then there will not be any data for those districts. The school-based weights are based on the set of districts that had schools and teachers selected in the sample.

As an example, if you were interested in estimating the number of districts in a state you would use the LEA-based weights. However, if you were interested in whether districts with a high poverty level (high free lunch eligibility) have more drug use problems, then you would have to go to the principal questionnaire and average within district the responses to questions 14 i and j (administrator's opinions about how severe the problem of student's drug and alcohol abuse is in their school) in the administrator file and merge those averages to the district data. Then, you would use the district question 25 b (how many students in this district participate in free or reduced price lunch programs) with the second set of district weights (the school-based weights) to produce your estimates. Using the school-based weights only effects the three states mentioned above.

Replicate weights are used to generate standard errors. NCES recommends the use of the PC Wesvar statistical package developed by Westat, Inc. to generate accurate standard errors for SASS and TFS. (This package can be downloaded from the Westat Web site without cost at <www.westat.com>). The Balanced Repeated Replication (BRR) method used within PC Wesvar is also recommended.

Standard errors are a measure of sampling variability in survey results. The standard error is an estimate of the expected difference between a statistic

from a particular sample and the corresponding population value. The standard error of measurement is critical to determine the statistical significance of statistical inferences and interpretations. For example, if all possible samples were selected, and each was surveyed under the same conditions and an estimate and its standard error were calculated from each sample, then you can be 95% confident that the sample mean lies within 2 standard error units of the true mean. This information is valuable because it indicates the extent to which the sample estimates will be distributed around the population. Estimates in the SASS tables are subject to sampling variability. Standard errors were estimated using a bootstrap variance procedure that incorporated the design features of this complex sample survey.

The following is a list of final and replicate weights by file and cycle:

Final weights:		1993-95	1990-92	1987-89
SASS				
	Teacher	tchwgt	tchwgt	tchwgt
	School	schwgt	schwgt	schwgt
	Administrator	admwtg	admwtg	admwtg
	District	leawgt	leawgt	leawgt1/leawgts
	Student records	stuwgt	not applicable	not applicable
	LMC	lmcwgt	not applicable	not applicable
	LMS	lmswgt	not applicable	not applicable
TFS		tfswgt	tfswgt	tfswgt

Note that there are two sets of final weights on the 1987-88 District file. One weight is used for district level weighting (leawgt1) and the other weight is for district level weighting after merging the district file with the school file (leawgts). Analysts who will be linking schools with their respective LEA's in order to obtain school characteristics for LEA's should use leawgts. Analysts only concerned with district level characteristics, and therefore will not be linking district and school files, should use leawgt1.

Replicate weights:

Replicate weights for each file are consistently named repwgt1 - repwgt48. The only exception is on the 1987-88 district file which has two sets of replicate weights, one for linked district and school files (repwts1 - repwts48) and one for district level (repwt11 - repwt148) analysis

IX. Working with Missing Data

Sources of Missing Data

There are only two cases in which items will have missing information. The first is due to skip patterns in which the respondent naturally skipped the information that did not pertain. The second type of missing information occurs when a district or school does not respond to the survey or item and the information cannot be obtained through other sources. If a teacher within that district or school responds to the teacher questionnaire, then the district or school level information remains missing on the teacher file.

B. Imputing Missing Data

For questionnaire items that should have been answered but were not, values were imputed in hierarchical order by:

- o Using data from other items on the questionnaire;
- o Extracting data from a related component of the Schools and Staffing Survey (SASS) or Teacher Follow-up Survey (TFS) (e.g., using data from a school record to impute missing values on that school's district questionnaire);
- o Extracting data from the universe file (e.g., extracting information about the sample case from other sources such as the Private School Survey (PSS) or the Common Core of Data (CCD), collected in the same school year as the missing data);
- o Extracting data from a respondent with similar characteristics, commonly known as the "hot deck" method for imputing item nonresponse (Kalton and Kasprzyk 1982).

For some incomplete items, the entry from another part of the questionnaire, the sample file, or the data record was directly imputed to complete the item; for other items the entry was used as part of an adjustment factor with other data on the incomplete record. For example, if a respondent did not report whether a school offered a remedial reading program, the response ("yes" or "no") for a similar school was used to complete the record. However, if a respondent had answered "yes" to the item, but had not reported the number of students in the program, the ratio of number of students in remedial reading to total enrollment for a similar school was used as a multiplier to

calculate
the number in the program based on the school's total enrollment.

The procedures described above were carried out by computer processing. However, for a few items there were cases where entries were clerically imputed. The data record, sample file record, and, in some cases, the questionnaire were reviewed and an entry consistent with the information from those sources replaced the missing information. This procedure was used when
1) there was no suitable record to use as a donor, 2) the computer method produced an imputed entry that was outside the acceptable range for the item,
or 3) the item was unanswered (few cases occurred of this type, usually less than ten).

Note on 1987-88 SASS and 1988-89 TFS Files: In 1996, the 1987-88 SASS files and the 1988-89 TFS file were imputed using the methods described. A final stage of imputation included the matching of a preliminary copy of the 1987-88 PSS file and the 1988-89 PSS file by APIN and CNTLNUM to identify 79 1987-88 school file records with missing information on the typology variable. Seventy-five of the records were identified and the missing typology item was replaced with the combined PSS file information. The remaining four cases were clerically imputed. The complete school file was then used to update the Administrator, Teacher, and corresponding TFS files.

The following discussion focuses on specific surveys and the methods of imputation used for each.

For more detail and specific items imputed, please review the following publications:

1993-94 Schools and Staffing Survey: Data File User's Manual, Vol. I: Survey Documentation (NCES 96-142)
1993-94 Schools and Staffing Survey: Sample Design and Estimation (NCES 96-089)
1990-91 Schools and Staffing Survey: Data File User's Manual, Vol. I: Survey Documentation (NCES 93-144-I)
1987-88 Schools and Staffing Survey: User's Manual: Public and Private Teacher Demand and Shortage Questionnaires (NCES 91-021g).

1. SASS Teacher Demand and Shortage File (TDS) for Public Schools

For the 1987-88 and 1990-91 SASS, data were imputed to items with missing values in two stages. In the 1993-94 survey, a third stage was added to the imputation process. Specific items imputed for the TDS surveys for the

1990-91
and 1993-94 are included in:

a. First Stage Imputation for the TDS File

1987-88: The imputation method used was a sequential, hot deck procedure. This "nearest neighbor" approach matches the nonrespondent school or district with the most similar respondent in the same stratum.

1990-91, 1993-94: In the first stage, TDS questionnaire items with missing values were filled whenever possible by using information about the LEA from the following sources in both surveys:

- o Questionnaire items: Based on entries from related questionnaire items, assumptions were made about how the respondent should have answered items with missing values.
- o School records: If the LEA with missing data operated only one school and information for that school was collected in the survey, entries from the school record were used to fill items with missing values on the LEA record whenever possible.
- o Universe files: for a few cases, CCD data were used to impute entries.

b. Second Stage Imputation for the TDS File

1987-88: Following the hot deck procedure, responses were then imputed in one of two ways. The matched school or district's response was directly assigned to the respondent school or it was used as an adjustment factor with the other data in the nonrespondent school reported.

1990-91, 1993-94: In general, for both cycle's TDS, the second stage of imputation filled unanswered items by using data from the record for a similar LEA (i.e., an LEA that was the same level, of similar size, with a similar percentage of minority students, etc). Variables which describe certain characteristics of the LEAs (e.g. enrollment size, instructional level, and percent minority students) were created and used to sort the records and to match incomplete records to those with complete entries (donors). During this stage, items on the LEA questionnaire were grouped according to the relevance of the imputation variables to the data collected by the item.

For some items (e.g., number of days in school year), data were directly copied to the record with the missing value. For others, the entries on the

donor record were used as factors along with other questionnaire data to fill the incomplete items.

c. Third Stage Imputation for the TDS File

1993-94: For the TDS, there is a third stage of clerical imputation for a few items.

2. SASS School Principal File

(In 1987-88 and in 1990-91 the survey instrument for Principal was titled. School Administrator Questionnaire., although the respondents were defined as principals or heads of the school.)

1987-88: In 1996, the 1987-88 Administrator file was imputed using revised survey data.

1990-91, 1993-94: Data for the 1993-94 School Principal Questionnaire were imputed in three stages as described below. The first two stages were also performed for the 1990-91 School Administrator Questionnaire.

a. First Stage Imputation for the Principal File

Based on entries from related items on the same record, assumptions were made about how the respondent should have answered items with missing values. Data from the 1990-91 administrator record were also used to impute missing data. These variables were used during the second stage of imputation.

For the private school Administrator file some of the variables on the 1987-88 school file were updated prior to the imputation.

1990-91, 1993-94: During the first stage, items with missing values were filled by using data from the same record or by making some assumptions about the respondent's intended answer (e.g., not answering means "No" or "None"). Imputation variables were also created from questionnaire data or copied from the matching school record. These variables were used during the second stage of imputation.

b. Second Stage Imputation for the Principal File

1987-88: During the second stage of imputation, a hot deck procedure was used in which a set of variables was used to match records with missing values to the donor records (complete records from a similar school) with the

required
data.

1990-91, 1993-94: During the second stage of imputation, a hot deck procedure was used in which a set of variables was used to match records with missing values to the donor records (complete and similar records) with the required data. There were two sorts for each of the public and private school principal records.

c. Third Stage Imputation for the Principal File

1993-94: Clerical imputation was done for three items on the questionnaire: location of college where principal received bachelor's degree, gender (if name was missing, a donor was used), and year of birth.

3. SASS Public School File

Data for the 1993-94 Public School Questionnaire were imputed in three stages as described below. The first two stages were also performed for the 1990-91 School Administrator Questionnaire. Nonresponse items from the 1987-88 SASS School file were imputed using the hot deck method.

a. First Stage Imputation for the Public School File

1987-88: When imputation was used to determine missing items, the method applied was a sequential, hot deck procedure. This "nearest neighbor" approach matches the non-respondent school or district with the most similar respondent in the same stratum.

1990-91, 1993-94:

- o Based on entries from related items on the school record, assumptions were made about how the respondent should have answered items with missing values.
- o If the school's LEA participated in SASS, information from the LEA's record was used to complete some unanswered items on the school record.
- o If unanswered items could not be completed by using information from other items on the School record, the Library Survey (1993-94 only), the Principal Survey, or the Teacher Demand and Shortage record was used.

1993-94 (only):

- o The Library Survey: If items related to the school's library or librarian were unanswered and the school participated in the SASS Library Survey, information from the Library Survey questionnaires was used whenever possible.
- o The School Principal Survey: If the number of principals was not reported in items 16 and 17 and the Public School Principal Questionnaire indicated that the school did not have a principal, zero was imputed for the number of full-time and part-time principals in items 16 and 17.

In addition to filling items in the 1993-94 Public School questionnaire where some values were missing, some inconsistencies between items were corrected by ratio adjustment during the first stage of imputation.

b. Second Stage Imputation for the Public School File

1987-88: Following the hot deck procedure, responses were then imputed in one of two ways. The matched school or district's response was directly assigned to the respondent school or it was used as an adjustment factor with the other data in the nonrespondent school reported.

1990-91, 1993-94: In the second stage of imputation, SASS items with missing values were filled by using data from the record for a similar school (i.e., a school that was the same level, type, etc). Variables that describe certain characteristics of the school (e.g., type of community where school is located, type of school, and instructional level) were created and used to sort the records and to match incomplete records to those with complete data (donors). During the second stage of imputation, items on the public school questionnaire were grouped according to the relevance of the imputation variables to the data collected by the item.

Records for schools within each state (1993-94) were treated as a separate data set, and the donor schools and the recipient schools had to be within the same state. Either the donor values were used directly or as factors to calculate incomplete recipient items.

c. Third Stage - Clerical Imputations for the Public School File

1993-94: A few items were clerically imputed for some public school records.

4. SASS Private School File

a. First Stage Imputation for the Private School File

1987-88: The imputation method used was a sequential, hot deck procedure.

This "nearest neighbor" approach matches the non-respondent school or district with the most similar respondent in the same stratum.

1990-91: In the first stage of imputation, values for missing items were imputed by using other information on the questionnaire and information collected for the sample school in the 1989-90 Survey (PSS). If an item could not be filled by using data from other questionnaire items, information from the 1989-90 PSS or other sources that was included in the sample file record (or added to the school record) was used whenever possible.

1993-94: Because the 1993-94 school year was a survey year for both SASS and the PSS, the SASS Survey, the SASS Private School Questionnaire was modified to include all of the PSS questions, so that private schools selected for SASS would not be asked to complete two school questionnaires. Therefore, imputation for the data was done in six stages - stage 1, stage 2 and clerical imputation for PSS items; and stage 1, stage 2, and clerical imputation for non-PSS items.

In general, the procedures used for imputing PSS items and those for the rest of the SASS items were the same.

Values for missing items were imputed whenever possible by using information about the school from these sources:

- o 1991-92 Private School Survey
- o other questionnaire items on the school's SASS record
- o the Library Media Center Survey
- o the record for the school principal.

In addition to filling items where values were missing, some inconsistencies between items were corrected by ratio adjustment during the first stage of imputation.

b. Second Stage Imputation for the Private School File

1987-88: Following the hot deck procedure, responses were then imputed in one of two ways. The matched school or district's response was directly assigned to the respondent school or it was used as an adjustment factor with the other data in the nonrespondent school reported.

1990-91: During the second stage of imputation, items on the questionnaire were grouped according to the relevance of the imputation variables to the data collected by the item.

1993-94: In the second stage of imputation, items with missing values were filled by using data from the records for similar schools (i.e., schools that were the same level, type, size, etc.). For some items, the imputed entries could have come from private schools not selected for SASS, as well as those that participated in SASS. For non-PSS items, entries were imputed by using data from other SASS private schools that participated in SASS.

Variables that describe certain characteristics of the schools were created and used to sort the records and to match incomplete records to those with complete data (donors). During the second stage of imputation for both PSS and SASS, questionnaire items were grouped according to the relevance of the imputation variables to the data collected by the item. The private school records were sorted as follows:

- o PSS Items: Similar school records were near each other on the file.
- o Non-PSS Items: Records for schools that participated in SASS were also sorted so that records for similar schools were near each other on the file.

c. Third Stage Clerical Imputation for the Private School File

1993-94: A few items were clerically imputed for some private school records.

5. Teacher Files

Data for the 1993-94 Teacher Questionnaires (public and private school teachers) were imputed in three stages as described below. The first two stages were also performed for the 1990-91 School Administrator Questionnaires. For the 1987-88 SASS Questionnaires, imputation procedures were recently conducted using methodology similar to that used for the 1990-91 and 1993-94 teacher files.

a. First Stage Imputation for Public and Private School Teacher Files

During the first stage, items with missing values were filled by using other data from the same record or by making some assumptions about the

respondent's
intended answer that are consistent with other respondents' answers.

Also, during the first stage, imputation variables were created from questionnaire data or copied from the matching school record. These variables were then used during the second stage of imputation.

b. Second Stage Imputation for Teacher Files

During the second stage, a hot deck method of imputation (or selecting another respondents' data using criteria to match) was used. Items on the teacher questionnaire were grouped according to the relevance of the imputation variables to the particular missing data variable.

c. Third Stage Imputation for Teacher Files

1993-94: A few items were clerically imputed for some teacher records, when the first two stages of imputation could not produce.

6. SASS Student Record Files (1993-94 only)

These were new files for the SASS during the 1993-94 cycle (public and private school student records). Data were imputed in the three stages described below.

a. First Stage Imputation for the Student Records

During the first stage, items with missing values were filled by using other data from the same record or by making some assumptions about the respondent's intended answer (e.g., not answering means "No" or "None"). Also, during the first stage, imputation variables were created from questionnaire data or copied from the matching school record. These variables were used during the second stage of imputation.

b. Second Stage Imputation for the Student Record File

Second stage imputation variables were hot deck imputations sorted according to sector, public or private.

c. Third Stage Clerical Imputations for the Student Record File

A few items were clerically imputed where there were still missing values.

7. SASS Library Media Center File (1993-94 only)

1993-94: These were new files for the SASS during the 1993-94 cycle

(public and private school library media centers). Data were imputed in the three stages described below.

a. First Stage Imputation for the Library Media Center File

In the first stage, items with missing values were completed whenever possible by using information about the school library from the following sources:

o Based on entries from related items on the library record, some assumptions were made about how the respondent probably should have answered items with missing values.

o If items related to professional staff were unanswered on the library media center record, information from the matching librarian questionnaire was used to complete the items whenever possible.

For a few items with missing values, data from the matching school record were used to impute the entries.

b. Second Stage Imputation for the Library Media Center File

In general, the second stage of imputation filled unanswered items by using data from the record for a library of a similar school (i.e., a school that was the same level, of similar size, located in the same type of community, etc.). Variables that described certain characteristics of the schools were copied from the matching school record. In addition, a variable that categorizes the size of the library was created by using the number of books held at the end of the 1992-93 school year. These school variables and the library variable were used to sort the library records and to match incomplete records to those with complete entries.

Either the donor values were used directly or as factors to calculate incomplete recipient items. The library records (of both public and private schools) were sorted so that records for libraries of similar schools were near each other on the file.

8. SASS Library Media Specialist/Librarian File (1993-94 only)

These were new files for the SASS during the 1993-94 cycle (Public and Private Library Media Specialist/Librarians). Data were imputed in the three stages described below:

a. First Stage Imputation for the Library Media Specialist/Librarian File

In the first stage, items with missing values were completed whenever possible by using information about the school librarian from related items on the librarian record; some assumptions were made about how the respondent probably should have answered items with missing values.

b. Second Stage Imputation for the Library Media Specialist/librarian File

In general, the second stage of imputation filled unanswered items by using data from the record for a librarian at a similar school (i.e., a school that was the same level, of similar size, located in the same type of community, etc.). Variables that described certain characteristics of the schools were copied from the matching school record. These school and librarian variables were used to sort the librarian records and to match incomplete records to those with complete entries (donors). Either the donor values were used directly or as factors to calculate recipient items.

Both public and private school records were sorted so that records for librarians of similar schools were near each other on the file.

c. Third Stage Clerical Imputation for the Public and Private School Library Media Specialist/librarian File

A few items were clerically imputed for some cases with missing values.

9. Teacher Follow-up Survey Files

Imputations for the Teacher Follow-up Survey (TFS) included working with two files, the former teachers and the current teachers for each cycle.

In general, the TFS imputation strategy was designed to estimate change in teacher data corresponding to the previous cycle of SASS (e.g., 1991-92 TFS and 1990-91 SASS, etc.). Imputations for all three cycles followed similar methodology. Imputations for the 1988-89 TFS were recently done in order to ensure the consistency of the data across cycles.

Imputation processes for the three cycles of TFS were done in the following stages.

a. First Stage Imputation for the TFS File

First, a logical imputation procedure was done using SASS and TFS data from corresponding records to fill items with missing data. For example, if a respondent in the 1991-92 TFS did not report the age of his/her youngest child, the response from the 1990-91 SASS teacher questionnaire (with an adjustment for an increase of 1 year) was used.

b. Second Stage Imputation for the TFS File

Second stage imputation was the hot deck procedure done in two phases. First, donors were used to measure change for those items on both corresponding records (e.g., 1991-92 TFS and 1990-91 SASS, etc.). A donor was a respondent who had similar characteristics (i.e., region, teacher level, urbanicity, highest degree, and years of experience). The second phase of the hot deck imputation included those TFS items not on the corresponding SASS. For those items the hot deck method exclusively used TFS donor data to fill items having missing data. Variables were created, used to sort the file, and to match incomplete records to those with complete data (donors).

c. Third stage Imputation for the TFS File

The procedures described above were carried out by computer processing. However, for a few items there were cases where entries were clerically imputed. The data record, SASS teacher file record, and in some cases, the questionnaire were reviewed and an entry consistent with the information from those sources was imputed. This procedure was used when 1) there was not a suitable record to use as a donor, 2) the computer method produced an entry that was outside the acceptable range for the item, or 3) the item was unanswered (few cases of this type occurred, usually less than 10).

C. Imputation Flags

Entries imputed on the SASS and TFS records are identified by flags that denote the stage or type of imputation, as follows:

1 = ratio adjustment to original entry
2 = other stage 1 imputation (use of other questionnaire data, sample file, etc.)
3 = stage 2 imputation (use of donor)
4 = clerical imputation
0 = not imputed.

The variable names for these flags consist of F_ (F underscore) and the variable name for the data entry. For example, the flag for variable ASC012 on the public administrator file (SASS 1990-91) would be named F_ASC012.

If you wish to produce tables using only data that is not imputed the following sample SAS code will create a data set of non-imputed cases.

SAS CODE:

```
/* --- read in the public teachers file. --
- */
DATA ADMIN;
      INFILE 'E:\DATA\PUBLADM.DAT' LRECL=1024 PAD;
      INPUT ID 3-8 ASC012 450-450 F_ASC012 957-957;
/* --- create the labels for selected variables. --
- */
LABEL
      ASC012='DO YOU HAVE A BACHELOR^S DEGREE'
      F_ASC012='IMPUTATION FLAG FOR ASC012'

/* --- keep only not imputed cases (F_ASC012=0). --
- */
IF F_ASC012=0;
```

Resources

Abramson, Cole, Fondelier, Jackson, Parmer. 1993-94 Schools and Staffing Survey: Sample Design and Estimation. NCES 96-089. Washington D.C.: U.S. Department of Education. National Center for Education Statistics, 1996.

Broene, Pamela and Faupel, Elizabeth. 1987-88 Schools and Staffing Survey: Public and Private Teacher Demand and Shortage Questionnaires, Base Year: Data File Users Manual. NCES 91-021g. Washington, D.C.: U.S. Department of Education. National Center for Education Statistics, 1991.

Gruber, Kerry J., Rohr, Carol R., and Fondelier, Sharon E. 1993-94 Schools and Staffing Survey: Data File User's Manual, Volume I: Survey Documentation. NCES 96-142. Washington D.C.: U.S. Department of Education. National Center for Education Statistics, 1996.

Gruber, Kerry J., Rohr, Carol R., and Fondelier, Sharon E. 1990-91 Schools and Staffing Survey: Data File User's Manual, Vol. I: Survey Documentation. NCES 93-144-I. Washington, D.C.: U.S. Department of Education. National Center for Education Statistics, 1994.

Additional Imputation Resources

Kalton, G. and D Kasprzyk. 1982. "Imputing for Missing Survey Responses," Proceedings of the Section on Survey Research Methods. American Statistical Association, 22-31.

Kalton, G. 1983. *Compensating for Missing Survey Data*. Ann Arbor: Survey Research Center, University of Michigan.

Kalton, G. and D. Kasprzyk. 1986. "The Treatment of Missing Survey Data." *Survey Methodology*, Vol.12, No. 1, pp. 1-16.

Little, R.J.A. and D.B. Rubin. 1987. *Statistical Analysis with Missing Data*. John Wiley and Sons.

Madow, W.G. and D.B. Rubin (eds). 1983. *Incomplete Data in Sample Surveys*. Vols. 1, 2, and 3. New York. Academic Press

X. Analysis of SASS and TFS

Each cycle of the Schools and Staffing Survey (SASS) and the Teacher Follow-up Survey (TFS) is meant to be treated as cross-sectional survey data. There is a longitudinal aspect of SASS meaning that some schools have been sampled in each cycle, but longitudinal analysis is not recommended because there are no weights created for such analysis; the possible longitudinal findings cannot be generalized to other schools or the nation.

Trend analysis is possible using SASS and TFS even though both survey instruments have been modified over the three cycles, but comparisons can be made. The SASS and TFS crosswalks are available to assist in this process and are located in appendix A and the 1993-94 Data User's Manual. The crosswalks cross-reference each questionnaire by specific variables, so that the user can identify characteristics over time. In comparing these characteristics, it is imperative that the analyst take sampling variability into account. T-tests and other tests of statistical significance are strongly recommended. NCES also recommends the generation of standard errors using PC Wesvar (available for downloading at the Westat Website <www.westat.com>) which takes the complex survey design into account. The standard errors generated by SAS and SPSS are based on the assumption of simple random sampling. That assumption is not met with these data, therefore those standard errors underestimate the amount of variance.

In comparing public and private schools, teachers, or administrators by geographic area, NCES recommends the use of national or regional estimates. The sample design does not allow comparisons by state. Public schools are

representative by state, but private schools are not. Private schools have been selected by private school membership.

For some subgroups, unweighted sample sizes maybe too small too provide reliable estimates. Cross tabulations which produce estimates based upon few sample cases may be unreliable. Standard errors should be generated in order to assess how large a variance of the estimate results from the sample size. NCES policy is to not publish any data that are based upon fewer than 30 respondents in order to protect the integrity of the estimate. A sample size of less than 30 may have large variance.

Regression modeling should be limited to prediction within a cycle, and not performed across cycles. There are too few cycles to perform normal time series analysis. However, it is possible to compare the results of a regression model within one cycle against the results of the given model applied to the other cycles, respectively. Again, the surveys' complex design must be taken into account when generating the standard errors and significance levels.

References

Flemming, Emmett, Jr. 1992. NCES Statistical Standards. NCES 92-021. Washington, D.C.: U.S. Department of Education, National Center for Education Statistics, 1992.

Appendix A: Crosswalk among items in the 1987-88, 1990-91, 1993-94 SASS questionnaires and 1988-89, 1991-92, 1994-95 TFS questionnaires.

Teacher Demand and Shortage Questionnaire for Public School Districts (SASS 1A)

NOTE: If there is a blank in the variable name for 1987-88, 1990-91, that particular item did not have an equivalent item in 1993-94. Variables are listed in 1993-94 item order. See page 5 for variables not found on the 1993-94 form, but asked in one or more previous data collections.

1987-88 Variable name name	1990-91 Variable name	1993-94 Variable
	*Telephone noninterview reason items were recorded for some but not all potential respondents. Available only on internal research data file.	D0050

		D0055
		D0060
		D0065
		D0070
*Telephone noninterview reason items were recorded for some but not all potential respondents. Available only on internal research data file.	EXISTS	
		D0080
		D0115
	NOWUG	D0120
		D0125
DSC015	NOWKG	D0130
		D0135
DSC017 D0150,	NOW1_6	D0140,
		D0160,
D0170,		D0180,
D0190		
		D0145
		D0155
		D0165
		D0175
		D0185
		D0195
DSC019 D0210,	NOW7_12	D0200,
		D0220,
D0230,		D0240,
D0250		
		D0205
		D0215
		D0225
		D0235
		D0245
		D0255
DSC149	AMINDIST	D0405
DSC150	ASIADIST	D0410
DSC151	HISPDIST	D0415
DSC152	BLKDIST	D0420
DSC153	WHTDIST	D0425
		D0465
		D0480
	TUGNOW	D0995
DSC025	TKGNOW	D1000
DSC027, DSC029	T1_6NOW, T7_12NOW	D1005
DSC047	TTOTK_12	D1010
DSC052	CERTIFY	D1015
		D1025
DSC048	VACANCY	D1030
DSC049	ABOLSHD	D1035
		D1040
DSC053	NEWHIRES	D1045,
D1050		
DSC054	NEWCERTS	D1055
		D1065
	LAIIDOFF	D1070
DSC154	TCHAMIND	D1075

DSC155	TCHASIAN	D1080
DSC156	TCHISPNC	D1085
DSC157	TCHBLACK	D1090
DSC158	TCHWHITE	D1095
DSC116	FULLCERT	D1225
DSC117	EMERCERT	D1230
DSC118	TEACHED	D1235
DSC119	MAJORFLD	D1240
DSC121	STABASIC	D1245
DSC122	STASUBJ	D1250
DSC120	DISTEST	D1255
DSC123	NTEPASS	D1260,
D1265		
	TOTLIBRY	D1270
	VACNTLIB	D1275
	ABOLSHLB	D1280
		D1285
		D1505
		D1510
		D1515
		D1520
		D1525
		D1530
		D1535
		D1540
		D1545
		D1550
		D1555
		D1595
DSC144		D1600
DSC146		D1605,
D1610		
		D1625
		D1630
		D1645
DSC147		D1650
DSC148*		D1655,
D1660		
*88 asks for how many students were eligible and 94 ask for how many applicants were approved.		
		D1675
		D1680
		D1695
		D1700
		D1705
		D1710
		D1715
		D1720
		D1725
		D1730
		D1735
		D1740
		D1760
DSC132	YRSENGL	D1765
DSC134	YRSMATH, YRSCOMP	D1770,
D1775		
DSC136	YRSSOC	D1780
DSC138	YRSSCI	D1785
DSC140	YRSLANG	D1790

DSC143	YRS3_4	D1795
		D1800
		D1805
		D1810
		D1815
		D1845
		D1850
		D1855
		D1860
DSC080, DSC081*	LNGTHYR	D2080
*88 asks for days or months.		
		D2085
		D2090
	SALSCHED	D2095
DSC082	MINBACH	D2100
DSC083	MINMASTR	D2105
		D2110
DSC084	MAXMASTR	D2115
	HIGHSAL	D2120
	MINSALRY	D2125
	MAXSALRY	D2130
DSC124	RETIREMT	D2140
	INCREDIT	D2145
	INPURCH	D2150
	OUTCREDT	D2155
	OUTPURCH	D2160
	INCENTIV	D2190
DSC090*		
*88 includes to recruit or retain teachers to teach in less desirable locations OR in the fields of shortage.		
DSC091	INCNTCSH	D2195
DSC092	INCNTSTP	D2200
DSC093	INCNTINC	D2205
DSC090*	SHORTAGE	D2210
*88 includes to recruit or retain teachers to teach in less desirable locations OR in the fields of shortage.		
DSC095	SHORTCSH	D2215
DSC096	SHORTSTP	D2220
DSC097	SHORTINC	D2225
DSC099	SHRTSPEC	D2230
DSC100	SHRTMATH	D2235
DSC101	SHRTCOMP	D2240
DSC102	SHRTPHYS	D2245
DSC103	SHRTBIO	D2250
DSC104	SHRTESOL	D2255
DSC105	SHRTLANG	D2260
	SHRTVOC	D2265
DSC106*	SHRTOTHR*	D2270*
(other - specify)	(other - specify)	(none of the
above)		
		D2275
		D2280
		D2285
		D2290
		D2295

DSC107	RETRAINING	D2300
DSC108	RESPECL	D2305
DSC109	REMATH	D2310
DSC110	RECOMP	D2315
DSC111	REPHYS	D2320
DSC112	REBIO	D2325
DSC113	RESOL	D2330
DSC114	RELANG	D2335
	REVOTEC	D2340
DSC115*	REOTHER*	D2345*
(other - specify)	(other - specify)	(none of the
above)		

ADMINRGM	D2350
SRVHRS	D2355
SRVYMIN	D2360
	D2365

Items collected in 1987-88 and/or 1990-91, but not 1993-94

DSC011	EMPLYTCH
DSC012	LASTPK
DSC013	NOWPK
DSC021	NOWTOT
	*Includes ungraded & postsecondary.
DSC014	LASTKG
DSC016	LAST1_6
DSC018	LAST7_12
DSC020	
DSC021	
DSC022	TPKLAST
DSC023	TPKNOW
DSC024	TKGLAST
DSC026	T1_6LAST
DSC028	T7_12LST
DSC031	TTOTNOW
DSC030	TTOTLAST*
	*Includes ungraded & postsecondary.

DSC032
DSC033
DSC034
DSC035
DSC036
DSC037
DSC038
DSC039
DSC040
DSC041
DSC042
DSC043
DSC044
DSC045
DSC046
DSC050
DSC055
DSC056
DSC057
DSC058
DSC059
DSC060
DSC061
DSC062

DSC063	
DSC064	
DSC065	
DSC066	
DSC067	
DSC068	
DSC069	
DSC051	APPROVED
	LIBK_6
	LIBK7_12
DSC070	MEDICAL
DSC071	DENTAL
DSC072	LIFE
DSC073	PENSION
DSC074	HOUSING
DSC075	MEALS
DSC076	TRANSPT
DSC078	TUITION
DSC079	
DSC085	
DSC086	MERITPAY
DSC087	MERITCS
DSC088	MERITSTP
DSC089	MERITINC
DSC094	
DSC098	
DSC125	
DSC126	
DSC127	
DSC128	
DSC129	
DSC130*	ENROLHS
*88 asks respondent to mark the box if grades 10-12 are not served; 91 has yes and no boxes.	
DSC131	
DSC133	
DSC135	
DSC137	
DSC139	
DSC141	
DSC142	
DSC145	
DSC147	
DSC148	
DSC159	

Public School Principal Questionnaire (SASS 2A)

NOTE: If there is a blank in the variable name for 1987-88, 1990-91,
or
1993-94, that particular item was not asked in that year.

1987-88
Variable name

1990-91
Variable name

1993-94
Variable

name

ASC011*	ASC001	A055
*Only asks if there are no administrators.		
ASC015	ASC012	A060
ASC016	ASC013	A065
ASC017	ASC014	A070
	ASC015	A075,
A085		
	ASC016	A080,
A090		
		A095
		A100
		A105
ASC018		A110
ASC019		A115
ASC020		A120
ASC021	ASC017	A125
ASC022	ASC018	A130
ASC023	ASC019	A135
ASC024		A140
ASC025		A145
ASC026		A150
	ASC020	A155
ASC012	ASC021	A160
ASC013	ASC022	A165
ASC014	ASC023	A170
ASC027	ASC024	A175
ASC028	ASC025	A180
ASC029	ASC026	A185
ASC030, ASC033	ASC027	A190
ASC031, ASC034	ASC028	A195
ASC032, ASC035	ASC029	A200
ASC039	ASC030	A205
	ASC031	A210
ASC041	ASC033	A215
		A220
		A225
ASC045	ASC034	A230,
A240		
		A235
		A245
ASC046	ASC035	A250
		A255
ASC047	ASC036	A260
		A265
		A270
		A275
ASC048	ASC037	A280
		A285
ASC049	ASC038	A290
		A295
	ASC039	A300
		A305
	ASPIRING	A310
	TRAININD	A315
	ASC011	A320
ASC051	ASC044	A325
ASC052	ASC045	A330

	ASC085	A645
	ASC086	A650
	ASC087	A655
		A660
		A665
		A670
		A675
	SEACURRC	A680
		A685
ASC102*		
*Combines school district & governing board.		
ASC102*	BRDCURRC	A690
*Combines school district & governing board.		
ASC103	PRNCURRC	A695
ASC104	TEACURRC	A700
		A705
	LIBCURRC	A710
	PARCURRC	A715
		A720
		A725
ASC105*		
*Combines school district & governing board.		
ASC105*	BRDHIRNG	A730
*Combines school district & governing board.		
ASC106	PRNHIRNG	A735
ASC107	TEAHIRNG	A740
	PARHIRNG	A745
	SEADISPL	A750
		A755
ASC108*		
*Combines school district & governing board.		
ASC108*	BRDDISPL	A760
*Combines school district & governing board.		
ASC109	PRNDISPL	A765
ASC110	TEADISPL	A770
	PARDISPL	A775
		A780
		A785
		A790
		A795
		A800
		A805
		A810
		A815
		A820
		A825
		A830
		A835
		A840
		A845
		A850
		A855
		A860
		A865
		A870
	ASC115	A875
	ASC116	A880
	ASC117	A885

ASC072	ASC121	A890
ASC073	ASC122	A895
	ASC123	A900
ASC074	ASC124	A905
ASC075	ASC125	A910
		A915
		A920
ASC036		
ASC040		
ASC042		
ASC043		
ASC044		
ASC050	ASC040	
ASC053	ASC046	
ASC054	ASC047	
ASC055	ASC048	
	ASC054	
ASC064	ASC059	
ASC076		
ASC077		
ASC078		
ASC079		
ASC080		
ASC081		
ASC082		
ASC083		
ASC084		
ASC085		
ASC086		
ASC098	ASC081	
ASC100		
ASC101		
ASC111		
ASC112		
ASC113		
ASC114		
ASC115		
ASC116		
ASC117		
ASC118		
ASC119		
ASC120		

Private School Principal Questionnaire (SASS 2B)

NOTE: If there is a blank in the variable name for 1987-88, 1990-91, or 1993-94, that particular item was not asked in that year.

1987-88 Variable name name	1990-91 Variable name	1993 -94 Variable
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ASC011*	ASC001	A055
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*Only asks if there

are no administrators.

ASC015	ASC012	A060
ASC016	ASC013	A065
ASC017	ASC014	A070
	ASC015	A075,
A085		
A090	ASC016	A080,
		A095
		A100
		A105
ASC018		A110
ASC019		A115
ASC020		A120
ASC021	ASC017	A125
ASC022	ASC018	A130
ASC023	ASC019	A135
ASC024		A140
ASC025		A145
ASC026		A150
	ASC020	A155
ASC012	ASC021	A160
ASC013	ASC022	A165
ASC014	ASC023	A170
ASC027	ASC024	A175
ASC028	ASC025	A180
ASC029	ASC026	A185
ASC030, ASC033	ASC027	A190
ASC031, ASC034	ASC028	A195
ASC032, ASC035	ASC029	A200
ASC039	ASC030	A205
	ASC031	A210
ASC041	ASC033	A215
		A220
		A225
ASC045	ASC034	A230,
A240		
		A235
		A245
ASC046	ASC035	A250
		A255
ASC047	ASC036	A260
		A265
		A270
		A275
ASC048	ASC037	A280
		A285
ASC049	ASC038	A290
		A295
	ASC039	A300
		A305
	ASPIRING	A310
	ASC011	A320
ASC051	ASC044	A325
ASC052	ASC045	A330
		A335
		A340
		A345
		A350
		A355
		A360

ASC056
ASC057
ASC058
ASC059

ASC049
ASC050
ASC051
ASC052

ASC053

ASC060
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ASC066
ASC067
ASC068
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ASC062
ASC063
ASC069
ASC065
ASC064

ASC055
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ASC057
ASC058
ASC064
ASC060
ASC059

ASC071
ASC087
ASC088
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ASC091
ASC092
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ASC094
ASC095
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ASC099

ASC066
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ASC069
ASC067
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A660
A665

		A670
		A675
ASC102	BRDCURRC	A690
ASC103	PRNCURRC	A695
ASC104	TEACURRC	A700
		A705
	LIBCURRC	A710
	PARCURRC	A715
ASC105	BRDHIRNG	A730
ASC106	PRNHIRNG	A735
ASC107	TEAHIRNG	A740
	PARHIRNG	A745
ASC108	BRDDISPL	A760
ASC109	PRNDISPL	A765
ASC110	TEADISPL	A770
	PARDISPL	A775
		A790
		A795
		A800
		A805
		A810
		A825
		A830
		A835
		A840
		A855
		A860
		A865
		A870
	ASC115	A875
	ASC116	A880
	ASC117	A885
ASC072	ASC121	A890
ASC073	ASC122	A895
	ASC123	A900
ASC074	ASC124	A905
ASC075	ASC125	A910
		A915
		A920
ASC036		
ASC040		
ASC042		
ASC043		
ASC044		
ASC050	ASC040	
ASC053	ASC046	
ASC054	ASC047	
ASC055	ASC048	
	ASC054	
ASC076		
ASC077		
ASC078		
ASC079		
ASC080		
ASC081		
ASC082		
ASC083		
ASC084		
ASC085		
ASC086		
ASC098	ASC081	

ASC100
 ASC101
 ASC111
 ASC112
 ASC113
 ASC114
 ASC115
 ASC116
 ASC117
 ASC118
 ASC119
 ASC120

Public School Questionnaire (SASS 3A)

NOTE: If there is a blank in the variable name for 1987-88, 1990-91,
 or
 1993-94, that particular item was not asked in that year.

1987-88 Variable name name	1990-91 Variable name	1993-94 Variable
		S0055
		S0060
	OPERATE	S0070
		S0075
		S0080
		S0100
		S0105
		S0110
SSC132	OFFERUG	S0115
SSC133	NUMBRUG	S0120
SSC102	OFFERKG	S0125
SSC103	NUMBRKG	S0130
SSC104	OFFER1	S0135
SSC105	NUMBR1	S0140
SSC106	OFFER2	S0145
SSC107	NUMBR2	S0150
SSC108	OFFER3	S0155
SSC109	NUMBR3	S0160
SSC110	OFFER4	S0165
SSC111	NUMBR4	S0170
SSC112	OFFER5	S0175
SSC113	NUMBR5	S0180
SSC114	OFFER6	S0185
SSC115	NUMBR6	S0190
SSC116	OFFER7	S0195
SSC117	NUMBR7	S0200
SSC118	OFFER8	S0205
SSC119	NUMBR8	S0210
SSC120	OFFER9	S0215
SSC121	NUMBR9	S0220
SSC122	OFFER10	S0225
SSC123	NUMBR10	S0230

SSC124	OFFER11	S0235
SSC125	NUMBR11	S0240
SSC126	OFFER12	S0245
SSC127	NUMBR12	S0250
	ENRK12UG	S0255
SSC052	AMINDSTU	S0405
SSC053	ASIANSTU	S0410
SSC054	HISPNSTU	S0415
SSC055	BLACKSTU	S0420
SSC056	WHITESTU	S0425
SSC016*	PCTMALE	S0455
*Question in 88 and 91 ask for percent and in 94 ask for number.		
SSC051*	ABSNTST	S0460
*Question asks for percent in 88 and number in 91 and 94.		
SSC049*	NUMHOURS	S0470
*88 refers to students in the highest grade. 91 and 94 refers to students in the school.		
SSC050*	NUMMNTE	S0475
*88 refers to students in the highest grade. 91 and 94 refers to students in the school.		
SSC099*	ADMITREQ	S0700
*Response options differ.		
SSC091	ADMITEST	S0705
SSC092	ACHVTEST	S0710
SSC093	RECORDS	S0715
SSC094	SPECIAL	S0720
SSC095	TALENT	S0725
SSC096	INTRVIEW	S0730
SSC097	RECMNDS	S0735
SSC098		S0750
	MOSTIMP	S0755
	PGMTYPE	S0760
SSC014*		S0770
*Response options differ.		
SSC156*	PTHEADS	S0815
*Includes both principals and assistant principals. Question asks for FTE's in 88 and asks full and part time staff separately in 91 and 94.		
SSC162*	PTPROSTF	S0830,
S0845		
*Question asks for FTE's in 88 and asks full and part time staff separately in 91 and 94.		
SSC160*	PTGUIDES, PTVTOUN	S0835
*Question asks for FTE's in 88 and asks full and part time staff separately in 91 and 94.		

SSC161*	PTLIBRNS	S0840
*Question asks for FTE's in 88 and asks full and part time staff separately in 91 and 94.		
SSC157*		S0850
*Question asks for FTE's in 88 and asks full and part time staff separately in 91 and 94.		
SSC165*	PTMEDIA	S0855
*Question asks for FTE's in 88 and asks full and part time staff separately in 91 and 94.		
SSC166*	PTAIDES	S0860
S0870		
SSC166*	PTALLOTH	S0865,
*Question asks for FTE's in 88 and asks full and part time staff separately in 91 and 94.		
SSC156*	FTHEADS	S0875
*Includes both principals and assistant principals. Question asks for FTE's in 88 and asks full and part time staff separately in 91 and 94.		
SSC162*	FTASSIST	S0880
S0905		
SSC162*	FTPROSTF	S0890,
*Question asks for FTE's in 88 and asks full and part time staff separately in 91 and 94.		
SSC160*	FTGUIDES, FTVTCOUN	S0895
*Question asks for FTE's in 88 and asks full and part time staff separately in 91 and 94.		
SSC161*	FTLIBRNS	S0900
*Question asks for FTE's in 88 and asks full and part time staff separately in 91 and 94.		
SSC157*	S0910	
*Question asks for FTE's in 88 and asks full and part time staff separately in 91 and 94.		
SSC165*	FTMEDIA	S0915
*Question asks for FTE's in 88 and asks full and part time		
	FTAIDES	S0920

staff separately in 91
and 94.

SSC166*
S0930

*Question asks for
FTE's in 88 and asks
full and part time
staff separately in 91
and 94.

SSC057
SSC058
SSC059
SSC060
SSC061

FTALLOTH

S0925,

AMINDTCH
ASIAN TCH
HISPNTCH
BLACKTCH
WHITETCH
ABSNTCH
VACNCY

S0965
S0970
S0975
S0980
S0985
S0990
S1100
S1105

LESSQUAL
CANCEL
EXPANDSZ
ADDSC TN
REASSIGN

S1110
S1115
S1120
S1125
S1130
S1135

SUBTEACH

S1140
S1145

GENLVAC
SPECLVAC
ENGLVAC
MATHVAC
PHYSVAC
BIOSVAC
ESOLVAC
FORGNVAC

S1150
S1155
S1160
S1165
S1170
S1175
S1180
S1185

S1190
S1195
S1200
S1205
S1210
S1215
S1290
S1295
S1300
S1305
S1310
S1315
S1320
S1325
S1330
S1335
S1340
S1345
S1350
S1355

SSC066
SSC067
SSC068
SSC069
SSC070
SSC071
SSC072
SSC073

READPGM
READNUM
MATHPGM
MATHNUM
SPECLPGM
SPCLNUM
GIFTDPGM
GIFTDNUM

S1360
S1365
S1370
S1375
S1380
S1385
S1390
S1395

SSC078	AFTERPGM	S1400
SSC079	AFTERNUM	S1405
SSC064	ESOLPGM	S1410
SSC065	ESOLNUM	S1415
SSC062	BILNGPGM	S1420
SSC063	BILNGNUM	S1425
SSC076	DIAGNPGM	S1430
		S1435
	OWNLIBRY	S1440
		S1445
		S1450
		S1455
		S1460
		S1465
		S1470
		S1475
		S1480
		S1485
	KGOFFER	S1490
	KGLENDAY	S1495
	KGNUMDAY	S1500
		S1505
		S1510
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		S1570
		S1575
		S1580
		S1585
		S1590
SSC081	CHPTRONE	S1600
SSC083*	ONESVPK	S1605
*In 88 this variable included both PK and K-12.		
SSC083*	ONESVK12	S1610
*In 88 this variable included both PK and K-12.		
S1630	ONETEACH	S1625,
SSC087	NOLUNCH	S1645
SSC084	FREELUNCH	S1650
SSC085*		S1655,
S1660		
*88 asks how many students are eligible, 94 asks how many applicants were approved.		
SSC086*	LUNCHPK	S1675
*In 88 this variable included both PK and K-12.		
SSC086*	LUNCHK12	S1680

*In 88 this variable
included both PK
and K-12.
SSC137

TWELFTH

S1745

S1750

VOCTECH

S1755

S1820

SSC139

ENROL12

S1825

SSC140

GRADNUM

S1830,

S1835

SSC141*

GRADAPLY

S1840

*Question asks for
percent in 88 and
number in 91 and 94.

S1865

S1870

S1875

S1880

S1885

S1890

S1895

S1900

S1905

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S1930

S1935

S1940

S1945

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S1955

S1960

S1965

S1970

S1975

S1980

S1985

S1990

S1995

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S2005

S2010

S2015

S2020

S2025

S2030

S2035

S2040

S2045

S2050

S2055

S2060

S2065

S2070

S2075

S2355

S2360

S2365

SSC010

SSC011	THISYEAR
SSC012	LASTYEAR
SSC013	SCHLEVEL
SSC015	
SSC018	
SSC048	NUMDAYS
SSC074	
SSC075	
SSC077	DIAGNNUM
SSC088	
SSC089	
SSC090	
SSC100	OFFERPK
SSC101	NUMBRPK
SSC128, SSC130	OFFERPS
SSC129, SSC131	NUMBRPS
SSC134	
SSC135	
SSC136	
SSC138*	COLLPREP
*Question asks for percent in 88 and number in 91.	PREPNUM
SSC142	
SSC143	
SSC144	
SSC145	
SSC146	
SSC147	
SSC148	FULTEACH
SSC149	PARTEACH
SSC150	TOTTEACH
SSC151*	LESS3EXP
*Question asks for percent in 88 and number in 91.	
SSC152*	LESS10EX
*Question asks for percent in 88 and number in 91.	
SSC153*	LESS21EX
*Question asks for percent in 88 and number in 91.	
SSC154*	MOREXP21
*Question asks for percent in 88 and number in 91.	
SSC155	
SSC167	VOLNTSVC
SSC168	VOLNTNUM
SSC169	
SSC170	
SSC171	LFTTTOTAL
	PRTEACH
	VOTECVAC*
	*Just one category in 1991. In 94, fields listed separately.
SSC172	

SSC173
SSC174
SSC175
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SSC295
SSC296
SSC297
SSC298
SSC299

Private School Questionnaire (SASS 3B)

NOTE: If there is a blank in the variable name for 1987-88, 1990-91, or 1993-94, that particular item was not asked in that year.

1987-88 Variable name name	1990-91 Variable name	1993-94 Variable
		S0055
		S0060
	OPERATE	S0070
		S0075
		S0080
		S0100
SSC132	OFFERUG	S0115
SSC133	NUMBRUG	S0120
SSC102	OFFERKG	S0125
SSC103	NUMBRKG	S0130
SSC104	OFFER1	S0135
SSC105	NUMBR1	S0140
SSC106	OFFER2	S0145
SSC107	NUMBR2	S0150
SSC108	OFFER3	S0155
SSC109	NUMBR3	S0160
SSC110	OFFER4	S0165
SSC111	NUMBR4	S0170
SSC112	OFFER5	S0175
SSC113	NUMBR5	S0180
SSC114	OFFER6	S0185
SSC115	NUMBR6	S0190
SSC116	OFFER7	S0195
SSC117	NUMBR7	S0200
SSC118	OFFER8	S0205
SSC119	NUMBR8	S0210
SSC120	OFFER9	S0215
SSC121	NUMBR9	S0220
SSC122	OFFER10	S0225
SSC123	NUMBR10	S0230
SSC124	OFFER11	S0235
SSC125	NUMBR11	S0240
SSC126	OFFER12	S0245
SSC127	NUMBR12	S0250
	ENRK12UG	S0255
SSC052	AMINDSTU	S0405
SSC053	ASIANSTU	S0410
SSC054	HISPNSTU	S0415
SSC055	BLACKSTU	S0420

SSC056	WHITESTU	S0425
SSC015	COEDSCHL	S0450
SSC016*	PCTMALE	S0455
*Question in 88 and 91 ask for percent and in 94		
SSC051*	ABSNTST	S0460
*Question asks for percent in 88 and number in 91 and 94.		
SSC048*	NUMDAYS	S0465
*88 refers to students in the highest grade. 91 and 94 refers to students in this school.		
SSC049*	NUMHOURS	S0470
*88 refers to students in the highest grade. 91 and 94 refers to students in this school.		
SSC050*	NUMMNTE	S0475
*88 refers to students in the highest grade. 91 and 94 refers to students in this school.		
SSC020*	AFFILPUR	S0485
*88 combines orientation, purpose, or affiliation; and religious denomination.		
SSC020*	RELIGDEN	S0490
*88 combines orientation, purpose, or affiliation; and religious denomination.		
SSC021*	AFFILIAT	S0495
*Response options differ.		
SSC022	CATHTYPE	S0500
SSC023	ACE	S0505
	ASN	S0510
SSC040	NCACS	S0515
SSC024	AACS	S0520
SSC025	AMONTSRI	S0525
	OTHMTSRI	S0530
SSC026	ACSI	S0535
SSC027	MLTRYSCH	S0540
	BILNGSCH	S0545
	CBE	S0550
	OTHBILNG	S0555
SSC029	CSI	S0560
	CEC	S0565
SSC037	NAPEC	S0570
	OTHXPCHL	S0575
		S0580
	ECEA	S0585
	OTHECE	S0590
	ECIS	S0595
	OTHINTL	S0600
SSC031	FRIENDS	S0605
SSC032	SVNTHDAY	S0610
SSC035	EPISCPLS	S0615
SSC036	NAIS	S0620
SSC042	NIPSA	S0625

	OTHINDPV	S0630
	LABSCHLS	S0635
SSC038	NCEA	S0640
SSC033	JESUITS	S0645
SSC039	NCNE	S0650
SSC041	NFCS	S0655
SSC043	HBREWDAY	S0660
SSC045	SCHECHTR	S0665
	OTHJEWSH	S0670
SSC044	ORALRBTS	S0675
	OTHCHRST	S0680
	OTHRELIG	S0685
	NONRELIG	S0690
SSC047	NONE2	S0695
SSC099*	ADMITREQ	S0700
*Resonse options differ.		
SSC091	ADMITEST	S0705
SSC092	ACHVTEST	S0710
SSC093	RECORDS	S0715
SSC094	SPECIAL	S0720
SSC095	TALENT	S0725
SSC096	INTRVIEW	S0730
SSC097	RECMNDS	S0735
	RELIGAFF	S0740
SSC098		S0750
	MOSTIMP	S0755
SSC014*	PGMTYPE	S0760
*Response options differ.		
		S0765
SSC019	FAMLYRES	S0775
		S0780
	ALLBOARD	S0785
SSC017*	BOARDNUM	S0790
*Question asks for percent in 88 and number in 91 and 94.		
SSC088	CHARGETU	S0795
SSC089	DISCOUNT	S0800
SSC090	TUITIN	S0805
		S0810

Private School Questionnaire (SASS 3B)

1987-88 Variable name name	1990-91 Variable name	1993-94 Variable
SSC156*	PTHEADS	S0815
*Includes both principals and assistant principals. Question asks for FTE's in 88 and ask full and part time staff separately in 91 and 94.	PTASSIST	S0820
SSC162*	PTPROSTF	S0825
S0845 Question asks for FTE's in 88 and ask full and part time staff separately in 91 and 94.		S0830,
SSC160*	PTGUIDES, PTVTCOUN	S0835

Question asks for FTE's in 88 and ask full and part time staff separately in 91 and 94. SSC161*	PTLIBRNS	S0840
Question asks for FTE's in 88 and ask full and part time staff separately in 91 and 94. SSC165*	PTMEDIA PTAIDES	S0855 S0860
Question asks for FTE's in 88 and ask full and part time staff separately in 91 and 94. SSC166* S0870	PTALLOTH	S0865,
Question asks for FTE's in 88 and ask full and part time staff separately in 91 and 94. SSC156* *Includes both principals and assistant principals. Question asks for FTE's in 88 and asks full and part time staff separately in 91 and 94.	FTHEADS FTASSIST	S0875 S0880
SSC162* S0905	FTPROSTF	S0885 S0890,
Question asks for FTE's in 88 and ask full and part time staff separately in 91 and 94. SSC160*	FTGUIDES, FTVTCOUN	S0895
Question asks for FTE's in 88 and ask full and part time staff separately in 91 and 94. SSC161*	FTLIBRNS	S0900
Question asks for FTE's in 88 and ask full and part time staff separately in 91 and 94.	FTMEDIA	S0915
SSC165* Question asks for FTE's in 88 and ask full and part time staff separately in 91 and 94.	FTAIDES	S0920
SSC166* S0930	FTALLOTH	S0925,
Question asks for FTE's in 88 and ask full and part time staff separately in 91 and 94. SSC174	FULTEACH	S0935 S0940 S0945 S0950 S0955
SSC057	TOTTEACH	S0960
SSC058	AMINDTCH	S0965
SSC059	ASIAN TCH	S0970
SSC060	HISPNTCH	S0975
SSC061	BLACKTCH	S0980
	WHITETCH	S0985
	ABSNTCH	S0990
	TUGNOW	S0995

	TKGNOW	S1000
	T1_6NOW, T7_12NOW	S1005
	TTOTK_12	S1010
	CERTIFY	S1015
		S1020
	VACANCY	S1030
	ABOLISHD	S1035
SSC173*	NEWHIRES	S1045,
S1050		
*88 refers to headcounts		
and 91 and 94 refer to FTE's.		
	NEWCERTS	S1055
		S1060
	LAI DOFF	S1070
	VACNCY	S1100
		S1105
	LESSQUAL	S1110
	CANCEL	S1115
	EXPANDSZ	S1120
	ADDSC TN	S1125
	REASSIGN	S1130
		S1135
	SUBTEACH	S1140
		S1145
	GENLVAC	S1150
	SPECLVAC	S1155
	ENGLVAC	S1160
	MATHVAC	S1165
	PHYSVAC	S1170
	BIOSVAC	S1175
	ESOLVAC	S1180
	FORGNVAC	S1185
		S1190
		S1195
		S1200
		S1205
		S1210
		S1215
	PVTCERT	S1220
	FULLCERT	S1225
	EMERCERT	S1230
	TEACHED	S1235
	MAJORFLD	S1240
	STABASIC	S1245
	STASUBJ	S1250
	DISTEST	S1255
	NTEPASS	S1260,
S1265		
		S1290
		S1295
		S1300
		S1305
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		S1315
		S1320
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		S1345

		S1350
		S1355
SSC066	READPGM	S1360
SSC067	READNUM	S1365
SSC068	MATHPGM	S1370
SSC069	MATHNUM	S1375
SSC070	SPECLPGM	S1380
SSC071	SPCLNUM	S1385
SSC072	GIFTDPGM	S1390
SSC073	GIFTDNUM	S1395
SSC078	AFTERPGM	S1400
SSC079	AFTERNUM	S1405
SSC064	ESOLPGM	S1410
SSC065	ESOLNUM	S1415
SSC062	BILNGPGM	S1420
SSC063	BILNGNUM	S1425
SSC076	DIAGNPGM	S1430
		S1435
	OWNLIBRY	S1440
		S1445
		S1450
		S1455
		S1460
		S1465
		S1470
		S1475
		S1480
		S1485
	KGOFFER	S1490
	KGLENDAY	S1495
	KGNUMDAY	S1500
		S1505
		S1510
		S1515
		S1520
		S1525
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		S1540
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		S1555
		S1565
		S1570
		S1575
		S1580
		S1585
		S1590
	CHPTRONE	S1600
SSC083*	ONESVPK	S1605
*In 88 this variable included both PK and K-12.		
SSC083*	ONESVK12	S1610
*In 88 this variable included both PK and K-12.		
	ONETEACH	S1625,
S1630		
SSC087		S1645
SSC084		S1650
SSC085*		S1655,
S1660		

*88 asks how many students
are eligible and 94 asks how
many applicants were approved.

SSC086		S1675,
S1680		
SSC137	TWELFTH	S1745
		S1750
	VOCTECH	S1755
		S1760
	YRSENGL	S1765
	YRSMATH	S1770
	YRSCOMP	S1775
	YRSSOC	S1780
	YRSSCI	S1785
	YRSLANG	S1790
	YRS3_4	S1795
		S1800
		S1805
		S1810
		S1815
		S1820
SSC139	ENROL12	S1825
SSC140	GRADNUM	S1830,
S1835		
SSC141*	GRADAPL	S1840
*Question asks for percent in 88 and number in 91 and 94.		
		S1845
		S1850
		S1855
		S1860
		S1865
		S1870
		S1875
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		S1900
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		S1920
		S1925
		S1930
		S1935
		S1940
		S1945
		S1950
		S1955
		S1960
		S1965
		S1970
		S1975
	LNGTHYR	S2080
	SALSCHED	S2095
	MINBACH	S2100
	MINMASTR	S2105
		S2110
	MAXMASTR	S2115

	HIGHSAL	S2120
	MINSALRY	S2125
	MAXSALRY	S2130
	UNPAID, SERVICE	S2135
	RETIREMT	S2140
	CREDITCH	S2165
	SAMEORG	S2170
	ROLLOVER	S2175
	PURCHASE	S2180
	OTHERCRD	S2185
	SHORTAGE	S2210
	SHORTCSH	S2215
	SHORTSTP	S2220
	SHORTINC	S2225
	SHRTSPEC	S2230
	SHRTMATH	S2235
	SHRTCMP	S2240
	SHRTPHYS	S2245
	SHRTBIO	S2250
	SHRTESOL	S2255
	SHRTLNG	S2260
	SHRTVOC	S2265
		S2270
		S2275
		S2280
		S2285
		S2290
		S2295
	RETRAINING	S2300
	RESPECL	S2305
	REMATR	S2310
	RECOMP	S2315
	REPHYS	S2320
	REBIO	S2325
	RESOL	S2330
	RELANG	S2335
	REVOTEC	S2340
		S2345
	ADMINPGM	S2350
	SRVHRS	S2355
	SRVYMIN	S2360
		S2365
SSC010		
SSC011	LASTYEAR	
SSC012		
SSC013	SCHLEVEL	
SSC018	AREASIZE	
SSC028		
SSC030		
SSC034		
SSC046		
SSC074		
SSC075		
SSC077	DIAGNNUM	
SSC080		
SSC082		
SSC099		
SSC100	LIBRYALL	
SSC101	OFFERPK	
SSC128, SSC130	NUMBRPK	
	OFFERPS	

SSC129, SSC131	NUMBRPS
SSC134	TOTENRLL
SSC135	
SSC136	
SSC138	
SSC142	
SSC143	
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SSC148	
SSC149	
SSC150	
SSC151*	LESS3EXP
*Question asks for percent in 88 and number in 91.	
SSC152*	LESS10EX
*Question asks for percent in 88 and number in 91.	
SSC153*	LESS21EX
*Question asks for percent in 88 and number in 91.	
SSC154*	MOREXP21
*Question asks for percent in 88 and number in 91.	
SSC155	AFTERBAC
SSC156	
SSC157	
SSC158	
SSC159	
SSC163	
SSC164	
SSC167	VOLNTSVC
SSC168	VOLNTNUM
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SSC299

Public School Teacher Questionnaire (SASS 4A)

NOTE: If there is a blank in the variable name for 1987-88, 1990-91, or 1993-94, that particular item was not asked in that year.

1987-88 Variable name name	1990-91 Variable name	1993-94 Variable
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	TSC001	T0015
TSC010*	TSC011	T0020
*Response options differ.		
		T0025
TSC012	TSC012	T0030
	TSC013	T0035
TSC014*	TSC014	T0040
*Response options differ.		
TSC013*	TSC015	T0045
*Response options differ.		
TSC015*	TSC016	T0050
*Response options differ.		
TSC016*	TSC017	T0055
*Only includes full-time in 88 and both full-time and part- time in 91 and 94.		
TSC032*	TSC018	T0060
*Options 1 and 2 from 88 crosswalk with options 6 and 7 from 94.		
TSC035*	TSC019	T0065
*Response options differ.		
TSC036	TSC020	T0070
TSC037	TSC021	T0075
TSC038	TSC022	T0080
	TSC028	T0090
TSC025	FTPVT	T0095
TSC026	PTPVT	T0100
TSC023	FTPUB	T0105
TSC024	PTPUB	T0110
TSC027	TSC033	T0115,
T0120		
TSC028	TSC034	T0125
TSC029	TSC035	T0130
	TSC036	T0135
TSC030	TSC037	T0140
TSC031	TSC038	T0145
TSC032*	TSC039*	T0150
*Options 4 and 5 from 88 crosswalk.	*In 91, options collapsed into one question. In 88 and 94, options were grouped into 3 questions.	
TSC033		T0155
TSC034*	TSC039*	T0160
*Response options differ.	*In 91, options collapsed into one question. In 88 and 94, options were grouped into 3 questions.	
		T0165
TSC043	TSC040	T0170
TSC044	TSC041	T0175
TSC046	TSC042	T0180
	TSC043*	T0185,
T0195		
	*Second major or a minor field of study combined in 91. Listed separately in 94.	
TSC045	TSC044*	T0190,
T0200		
	*Second major or a minor field of study combined in 88 and 91. Listed separately in 94.	

TSC072		T0205
TSC074		T0210
		T0215
TSC047		T0220
TSC048		T0225
TSC050		T0230
TSC051	TSC045	T0235
TSC052	TSC046	T0240
TSC054	TSC047	T0245
TSC055		T0250
TSC056		T0255
TSC058		T0260
	TSC048	T0265
TSC039	TSC049	T0270
TSC040	TSC050	T0275
TSC042	TSC051	T0280
TSC059	TSC052	T0285
TSC060	TSC053	T0290
TSC062	TSC054	T0295
TSC063, TSC067	TSC055	T0300
TSC064, TSC068	TSC056	T0305
TSC066, TSC070	TSC057	T0310
TSC075	TSC058	T0315
TSC076	TSC059	T0320
TSC077	TSC060	T0325
TSC078	TSC061	T0330
TSC131	TSC101	T0335
TSC132*	TSC102*	T0340
*Response options differ.	*Response options differ.	
TSC133	TSC103	T0345
TSC134	TSC104	T0350
TSC135*	TSC105*	T0355
*Response options differ.	*Response options differ.	
TSC136	TSC106	T0360
		T0365
		T0370
		T0375
		T0380
		T0385
		T0390
		T0395
TSC079	TSC069	T0400
TSC080	TSC070	T0405
TSC081	TSC071	T0410
TSC082	TSC072	T0415
TSC083	TSC073	T0420
TSC084	TSC074	T0425
		T0430
	TSC077	T0435
TSC100, TSC101*	TSC078	T0440
*88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses.		
TSC102, TSC103*	TSC079	T0445
*88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses.		
	TSC080	T0450
TSC104, TSC105*	TSC081	T0455

88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses. TSC106, TSC107	TSC082	T0460
88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses. TSC108, TSC109	TSC083 TSC084	T0465 T0470
88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses. TSC110, TSC111	TSC085	T0475
88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses. TSC112, TSC113	TSC086 TSC087	T0480 T0485
88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses. TSC114, TSC115	TSC088	T0490
88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses. TSC116, TSC117	TSC089 TSC090	T0495 T0500
88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses. TSC118, TSC119	TSC091	T0505
88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses. TSC120, TSC121	TSC092 TSC093	T0510 T0515
88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses. TSC122, TSC123	TSC094	T0520
88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses. TSC124, TSC125	TSC095 TSC096	T0525 T0530
88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses. TSC126, TSC127	TSC097	T0535
*88 asks for number of		

courses by semester
and quarter. 91 and 94
asks for number of courses.
TSC099

T0540
T0545
T0550
T0555
T0560
T0565
T0570
T0575
T0580
T0585
T0590
T0595
T0600
T0605
T0610
T0615
T0620
T0625
T0630
T0635
T0640
T0645
T0650
T0655
T0660
T0665
T0670
T0675
T0680
T0685
T0690
T0695
T0700
T0705
T0710
T0715
T0720
T0725
T0730
T0735
T0740
T0745
T0750
T0755
T0760
T0765
T0770
T0775
T0780
T0785
T0790

T0795
T0800
T0805
T0810
T0815
T0820

TSC156
TSC140
TSC141
TSC142
TSC143
TSC144
TSC145
TSC146
TSC147
TSC148
TSC149
TSC150
TSC151
TSC152
TSC153
TSC154, TSC155
TSC157*
*Response options differ.
TSC158
TSC159
TSC160
TSC161
TSC162

TSC110
TSC111
TSC112
TSC113
TSC114
TSC115
TSC116
TSC117
TSC118
TSC119
TSC120
TSC121
TSC122
TSC123
TSC124
TSC125
TSC126
TSC127
TSC128

TSC129
TSC130
TSC131
TSC132
TSC133
TSC136

TSC166, TSC173,
T0835,
TSC180, TSC187,
T0855,
TSC194, TSC201,
T0875,
TSC208, TSC215,
T0895,
and TSC222*
T0915,
*Allowed for 9 responses
T0935,
in 88.
T0955,

T0965*

d for

responses

TSC169, TSC176,
T0840,
TSC183, TSC190,
T0860,
TSC197, TSC204,
T0880,
TSC211, TSC218,
T0900,
and TSC225*
T0920,
*Allowed for 9 responses
T0940,
in 88.
T0960,

T0970*

d for 15

es in

TSC234
TSC235
TSC236

TSC275
TSC276

TSC278
TSC279
TSC280
TSC281

TSC282

TSC137, TSC145, TSC153,
TSC161, TSC169, TSC177,
TSC185, TSC193, TSC201,
and TSC209*

*Allowed for 10 responses
in 91.

TSC140, TSC148, TSC156,
TSC164, TSC172, TSC180,
TSC188, TSC196, TSC204,
and TSC212*

*Allowed for 10 responses
in 91.

TSC217
TSC218

TSC219
TSC220
TSC221

TSC244
TSC245

TSC247
TSC248
TSC249
TSC250
TSC251
TSC252

T0825,
T0845,
T0865,
T0885,
T0905,
T0925,
T0945,
and
*Allowe

15

in 94.
T0830,

T0850,

T0870,

T0890,

T0910,

T0930,

T0950,

and

*Allowe

respons

94.

T0975

T0980

T0985

T0990

T0995

T1000

T1005

T1010

T1015

T1020

T1025

T1030

T1035

T1040

T1045

T1050

T1055

T1060

T1065

TSC283
TSC262
TSC263
TSC264
TSC265
TSC266
TSC267
TSC268
TSC269
TSC270
TSC271
TSC272
TSC274

TSC238
TSC239
TSC240
TSC241
TSC242
TSC243
TSC244
TSC245
TSC246
TSC247
TSC248
TSC249
TSC250
TSC251
TSC252
TSC253
TSC254
TSC255
TSC256
TSC257
TSC258
TSC259
TSC260

TSC261

TSC288

TSC253
TSC254
TSC255
TSC256
TSC257
TSC258
TSC259
TSC260
TSC261
TSC262
TSC263
TSC264
TSC266
TSC267
TSC268
TSC269
TSC270
TSC271
TSC272
TSC273
TSC274

TSC226

TSC227

TSC228

TSC234

TSC235

TSC236

TSC276

T1070
T1075
T1080
T1085
T1090
T1095
T1100
T1105
T1110
T1115
T1120
T1125
T1130
T1135
T1140
T1145
T1150
T1155
T1160
T1165
T1170
T1175
T1180
T1185
T1190
T1195
T1200
T1205
T1210
T1215
T1220
T1225
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T1245
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T1265
T1270
T1275
T1280
T1285
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T1295
T1300
T1305
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T1325
T1330
T1335
T1340
T1345
T1350
T1355
T1360
T1365
T1370

		T1375
		T1380
TSC291*	TSC279	T1385
*Response options differ.		
	TSC286	T1390
TSC304	TSC287	T1395
	TSC288	T1400
TSC305	TSC289	T1405
	TSC290	T1410
TSC306	TSC291	T1415
TSC307	TSC292	T1420
	TSC293	T1425
TSC308	TSC294	T1430
	TSC295	T1435
TSC309	TSC296	T1440
	TSC297	T1445
	TSC298	T1450
	TSC299	T1455
		T1465
		T1470
		T1475
		T1480
TSC311	HOUSEXPS	T1485
TSC312	MEALS	T1490
TSC316	TRANSPT	T1495
TSC315	COLLEGE	T1500
TSC314	CHLDCARE	T1510
TSC317	NONE	T1515
TSC318	FAMLYINC	T1520
TSC319	SEX	T1525
TSC320	RACE	T1530
	TRIBE	T1535
TSC321	HISPANIC	T1540
TSC322	BIRTHYR	T1545
TSC323	MARITAL	T1550
TSC324	DEPCHLDN	T1555,
T1560		
TSC325	AGEYOUNG	T1565
TSC326	OTHERDEP	T1570
TSC327	DEPCOUNT	T1575
		T1580
		T1585
		T1590
TSC328	TSC319	T1595
TSC329	TSC320	T1600
TSC330	TSC321	T1605
	SURVMINS	T1610
TSC017		
TSC018	TSC023	
TSC019	TSC024	
TSC020	TSC025	
TSC021	TSC026	
TSC011		
TSC022	TSC027	
TSC041		
TSC049		
TSC053		
TSC057		
TSC061		
TSC065		
TSC069		

TSC071	
TSC073	
TSC085	
TSC086	
TSC087	
TSC088	
TSC089	
TSC090	
TSC091	
TSC092	
TSC093	
TSC094	
TSC095	
TSC096	
TSC097	
TSC098	
TSC128	TSC098
TSC129	
TSC130*	TSC100
*Response options differ.	
TSC137	
TSC138	
TSC139	
TSC163	TSC134
TSC164	TSC135
TSC165	
TSC167, TSC174,	TSC138, TSC146,
TSC181, TSC188,	TSC154, TSC162,
TSC195, TSC202,	TSC170, TSC178,
TSC209, TSC216,	TSC186, TSC194,
and TSC223*	TSC202, and TSC210*
*Allowed for 9 responses	*Allowed for 10 responses
in 88.	in 91.
TSC168, TSC175,	TSC139, TSC147,
TSC182, TSC189,	TSC155, TSC163,
TSC196, TSC203	TSC171, TSC179,
TSC210, TSC217,	TSC187, TSC195,
and TSC224*	TSC203, and TSC211*
*Allowed for 9 responses	*Allowed for 10 responses
in 88.	in 91.
TSC170	
TSC171, TSC178,	TSC143, TSC151,
TSC185, TSC192,	TSC159, TSC167,
TSC199, TSC206,	TSC175, TSC183,
TSC213, TSC220,	TSC191, TSC199,
and TSC227*	TSC207, and TSC215*
*Allowed for 9 responses	*Allowed for 10 responses
in 88.	in 91.
TSC172, TSC179,	TSC144, TSC152,
TSC186, TSC193,	TSC160, TSC168,
TSC200, TSC207,	TSC176, TSC184,
TSC214, TSC221,	TSC192, TSC200,
and TSC228*	TSC208, and TSC216*
*Allowed for 9 responses	*Allowed for 10 responses
in 88. See question	in 91. See question 32
27 part g for 88.	part i for 91.
TSC177	
TSC184	
TSC191	
TSC198	
TSC205	

TSC212	
TSC219	
TSC226	
TSC229	
TSC230	
TSC231	
TSC232	
TSC233	
TSC237	
TSC273	TSC265
TSC275	TSC244
TSC277	TSC246
TSC284	
TSC285	
TSC286	
TSC287	
TSC289	TSC277
TSC290*	TSC278
*Response options differ.	
TSC292	
TSC293	TSC280
TSC294	
TSC295	TSC281
TSC296	
TSC297	TSC282
TSC298	
TSC299	TSC283
TSC300	
TSC301	TSC284
TSC302	
TSC303	TSC285
TSC310	TSC300
TSC313	TUITION

Private School Teacher Questionnaire (SASS 4B)

NOTE: If there is a blank in the variable name for 1987-88, 1990-91, or 1993-94, that particular item was not asked in that year.

1987-88 Variable name name	1990-91 Variable name	1993-94 Variable
	TSC001	T0015
TSC010*	TSC011	T0020
*Response options differ.		
TSC012	TSC012	T0025
	TSC013	T0030
	TSC014	T0035
TSC014*		T0040
*Response options differ.		
TSC013*	TSC015	T0045
*Response options differ.		
TSC015*	TSC016	T0050

Response options differ. TSC016	TSC017	T0055
*Only includes full-time in 88 and both full-time and part-time in 91 and 94.		
TSC032*	TSC018	T0060
*Options 1 and 2 from 88 crosswalk with options 6 and 7 from 94.		
TSC035	TSC019	T0065
TSC036	TSC020	T0070
TSC037	TSC021	T0075
TSC038	TSC022	T0080
	TSC028	T0090
TSC023	FTPUB	T0095
TSC024	PTPUB	T0100
TSC025	FTPVT	T0105
TSC026	PTPVT	T0110
TSC027	TSC033	T0115,
T0120		
TSC028	TSC034	T0125
TSC029	TSC035	T0130
	TSC036	T0135
TSC030	TSC037	T0140
TSC031	TSC038	T0145
TSC032*	TSC039*	T0150
*Options 4 and 5 crosswalk from 1988.	*In 91, options collapsed into one question. In 88 and 94, options were grouped into 3 questions.	
TSC033		T0155
TSC034*	TSC039*	T0160
*Response options differ.	*In 91, options collapsed into one question. In 88 and 94, options were grouped into 3 questions.	
		T0165
TSC043	TSC040	T0170
TSC044	TSC041	T0175
TSC046	TSC042	T0180
	TSC043*	T0185,
T0195		
	*Second major or a minor field of study combined in 91. Listed separately in 94.	
TSC045	TSC044*	T0190,
T0200		
	*Second major or a minor field of study combined in 88 and 91. Listed separately in 94.	
TSC072		T0205
TSC074		T0210
		T0215
TSC047		T0220
TSC048		T0225
TSC050		T0230
TSC051	TSC045	T0235
TSC052	TSC046	T0240
TSC054	TSC047	T0245
TSC055		T0250
TSC056		T0255
TSC058		T0260
	TSC048	T0265

and quarter. 91 and 94 asks for number of courses. TSC110, TSC111*	TSC085	T0475
*88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses.	TSC086 TSC087	T0480 T0485
TSC112, TSC113* *88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses. TSC114, TSC115*	TSC088	T0490
*88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses.	TSC089 TSC090	T0495 T0500
TSC116, TSC117* *88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses. TSC118, TSC119*	TSC091	T0505
*88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses.	TSC092 TSC093	T0510 T0515
TSC120, TSC121* *88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses. TSC122, TSC123*	TSC094	T0520
*88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses.	TSC095 TSC096	T0525 T0530
TSC124, TSC125* *88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses. TSC126, TSC127*	TSC097	T0535
*88 asks for number of courses by semester and quarter. 91 and 94 asks for number of courses. TSC099		T0540 T0545 T0550 T0555 T0560 T0565 T0570 T0575 T0580 T0585

		T0590
		T0595
		T0600
		T0605
		T0610
		T0615
		T0620
		T0625
		T0630
		T0635
		T0640
T0645		
		T0650
		T0655
		T0660
		T0665
		T0670
		T0675
		T0680
		T0685
		T0690
		T0695
		T0700
		T0705
		T0710
		T0715
		T0720
		T0725
		T0730
		T0735
		T0740
		T0745
		T0750
		T0755
		T0760
		T0765
		T0770
		T0775
		T0780
		T0785
		T0790
		T0795
		T0800
		T0805
		T0810
		T0815
		T0820
		T0825,
		T0845,
		T0865,
		T0885,
		T0905,
		T0925,
		T0945,
TSC156	TSC110	
TSC140	TSC111	
TSC141	TSC112	
TSC142	TSC113	
TSC143	TSC114	
TSC144	TSC115	
TSC145	TSC116	
TSC146	TSC117	
TSC147	TSC118	
TSC148	TSC119	
TSC149	TSC120	
TSC150	TSC121	
TSC151	TSC122	
TSC152	TSC123	
TSC153	TSC124	
TSC154, TSC155	TSC125	
TSC157*	TSC126	
	TSC127	
	TSC128	
*Response options differ.		
TSC158	TSC129	
TSC159	TSC130	
TSC160	TSC131	
TSC161	TSC132	
TSC162	TSC133	
	TSC136	
	TSC137, TSC145, TSC153,	
TSC166, TSC173,		
T0835,		
TSC180, TSC187,	TSC161, TSC169, TSC177,	
T0855,		
TSC194, TSC201,	TSC185, TSC193, TSC201,	
T0875,		
TSC208, TSC215,	and TSC209*	
T0895,		
and TSC222*	*Allowed for 10 responses	
T0915,		
*Allowed for 9 responses	in 91.	
T0935,		
in 88.		

T0955,		
T0965*		and
d for 15		*Allowe
es in		respons
TSC169, TSC176,	TSC140, TSC148, TSC156,	94.
T0840,		T0830,
TSC183, TSC190,	TSC164, TSC172, TSC180,	T0850,
T0860,		T0870,
TSC197, TSC204,	TSC188, TSC196, TSC204,	T0890,
T0880,	and TSC212*	T0910,
TSC211, TSC218,		T0930,
T0900,	*Allowed for 10 responses	T0950,
and TSC225*		and
T0920,	in 91.	*Allowe
*Allowed for 9 responses		15
T0940,		in 94.
in 88.		T0975
T0960,		T0980
T0970*		T0985
d for		T0990
responses		T0995
	TSC217	T1000
	TSC218	T1005
		T1010
TSC234	TSC219	T1015
TSC235	TSC220	T1020
TSC236	TSC221	T1025
		T1030
		T1035
TSC275	TSC244	T1040
TSC276	TSC245	T1045
		T1050
		T1055
TSC278	TSC247	T1060
TSC279	TSC248	T1065
TSC280	TSC249	T1070
TSC281	TSC250	T1075
	TSC251	T1080
TSC282	TSC252	T1085
TSC283	TSC253	T1090
TSC262	TSC254	T1095
TSC263	TSC255	T1100
TSC264	TSC256	T1105
TSC265	TSC257	T1110
TSC266	TSC258	T1115
TSC267	TSC259	T1120
TSC268	TSC260	T1125
TSC269	TSC261	T1130
TSC270	TSC262	
TSC271	TSC263	
TSC272	TSC264	
TSC274	TSC266	

TSC308	TSC294	T1430
	TSC295	T1435
TSC309	TSC296	T1440
	TSC297	T1445
	TSC298	T1450
	TSC299	T1455
	CONTRSV	T1460
		T1465
		T1470
		T1475
		T1480
TSC311	HOUSEXPS	T1485
TSC312	MEALS	T1490
TSC316	TRANSPT	T1495
TSC315	COLLEGE	T1500
TSC313	TUITION	T1505
TSC314	CHLDCARE	T1510
TSC317	NONE	T1515
TSC318	FAMLYINC	T1520
TSC319	SEX	T1525
TSC320	RACE	T1530
	TRIBE	T1535
TSC321	HISPANIC	T1540
TSC322	BIRTHYR	T1545
TSC323	MARITAL	T1550
TSC324	DEPCHLDN	T1555,
T1560		
TSC325	AGEYOUNG	T1565
TSC326	OTHERDEP	T1570
TSC327	DEPCOUNT	T1575
		T1580
		T1585
		T1590
TSC328	TSC320	T1595
TSC329	TSC321	T1600
TSC330	TSC322	T1605
	SURVMINS	T1610
TSC011		
TSC017		
TSC018	TSC023	
TSC019	TSC024	
TSC020	TSC025	
TSC021	TSC026	
TSC022	TSC027	
TSC041		
TSC049		
TSC053		
TSC057		
TSC061		
TSC065		
TSC069		
TSC071		
TSC073		
TSC085		
TSC086		
TSC087		
TSC088		
TSC089		
TSC090		
TSC091		
TSC092		

TSC093
TSC094
TSC095
TSC096
TSC097
TSC098

TSC128
TSC129
TSC130*

*Response options differ.

TSC137
TSC138
TSC139

TSC163
TSC164
TSC165

TSC167, TSC174,
TSC181, TSC188,
TSC195, TSC202,
TSC209, TSC216,
and TSC223*

*Allowed for 9 responses
in 88.

TSC168, TSC175,
TSC182, TSC189,
TSC196, TSC203,
TSC210, TSC217,
and TSC224*

*Allowed for 9 responses
in 88.

TSC170

TSC171, TSC178,
TSC185, TSC192,
TSC199, TSC206,
TSC213, TSC220,
and TSC227*

*Allowed for 9 responses
in 88.

TSC172, TSC179,
TSC186, TSC193,
TSC200, TSC207,
TSC214, TSC221,
and TSC228*

*Allowed for 9 response
in 88. See question
27 part g for 88.

TSC177

TSC184

TSC191

TSC198

TSC205

TSC212

TSC219

TSC226

TSC229

TSC230

TSC231

TSC232

TSC233

TSC076

TSC098

TSC100

TSC107

TSC134

TSC135

TSC138, TSC146,
TSC154, TSC162,
TSC170, TSC178,
TSC186, TSC194,
TSC202, and TSC210*

*Allowed for 10 responses
in 91.

TSC139, TSC147,
TSC155, TSC163,
TSC171, TSC179,
TSC187, TSC195,
TSC203, and TSC211*

*Allowed for 10 responses
in 91.

TSC143, TSC151,
TSC159, TSC167,
TSC175, TSC183,
TSC191, TSC199,
TSC207, and TSC215*

*Allowed for 10 responses
in 91.

TSC144, TSC152,
TSC160, TSC168,
TSC176, TSC184,
TSC192, TSC200,
TSC208, and TSC216*

*Allowed for 10 responses
in 91. See question 32 part i
for 91.

TSC237	
TSC273	TSC265
TSC277	TSC246
TSC284	
TSC285	
TSC286	
TSC287	
TSC289	TSC277
TSC290*	TSC278
*Response options differ.	
TSC292	
TSC293	TSC280
TSC294	
TSC295	TSC281
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TSC297	TSC282
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TSC299	TSC283
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TSC301	TSC284
TSC302	
TSC303	TSC285
TSC310	TSC300

Former Teachers Questionnaire (TFS 2)

1988-89 Variable name	1991-92 Variable name	1994-95 Variable name
	TFS003	TFS002
TFS002	TFS002	TFS003
TFS004	TFS004	TFS004
TFS005	TFS005	TFS005
TFS006	TFS006	TFS006
TFS007	TFS007	TFS007
TFS008	TFS008	TFS008
TFS009	TFS009	TFS009
TFS010	TFS010	TFS010
TFS011	TFS011	TFS011
TFS012	TFS012	TFS012
TFS013	TFS013	TFS013
TFS014	TFS014	TFS014
TFS015	TFS015	TFS015
TFS016	TFS016	TFS016
TFS017	TFS017	TFS017
TFS018	TFS018	TFS018
TFS019	TFS019	TFS019
TFS020	TFS020	TFS020
TFS021	TFS021	TFS021
TFS022	TFS022	TFS022
TFS023	TFS023	TFS023
TFS024	TFS024	TFS024
TFS025	TFS025	TFS025
TFS026	TFS026	TFS026
TFS027A	TFS027	TFS027

TFS027B
TFS027C
TFS027D
TFS027E
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TFS029A
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TFS029E
TFS030
TFS031
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TFS077	TFS087	TFS089
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TFS078	TFS088	TFS091
TFS079	TFS089	TFS092
TFS080	TFS090	TFS093
TFS081	TFS091	TFS094
	TFS093	TFS095
	TFS094	TFS096
	TFS095	TFS097
	TFS096	TFS098
	TFS097	TFS099

NOTE: If there is a blank variable name for 1988-89, 1991-92, or 1994-95, that particular item was not asked in that year.

Current Teachers Questionnaire (TFS 3)

1988-89 Variable name	1991-92 Variable name	1994-95 Variable name
	TFS003	TFS002
	TFS002	TFS003
	TFS106	TFS090
		TFS092
		TFS093
TFS104	TFS104	TFS094
		TFS095
TFS105	TFS105	TFS096
TFS107	TFS107	TFS107
TFS108	TFS108	TFS108
TFS109	TFS109	TFS109
TFS110	TFS110	TFS110
TFS111	TFS111	TFS111
TFS112	TFS112	TFS112
TFS113	TFS113	TFS113
TFS114	TFS114	TFS114
TFS115	TFS115	TFS115
TFS116	TFS116	TFS116
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TFS117	TFS117	
TFS118	TFS118	TFS118
TFS119	TFS119	TFS119
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TFS120	TFS120	
TFS130	TFS121	TFS121
TFS121A	TFS122	TFS122
TFS121B	TFS123	TFS123
TFS121C	TFS124	TFS124
TFS121D	TFS125	TFS125
TFS121E	TFS126	TFS126
TFS121F	TFS127	TFS127
TFS122A	TFS128	TFS128
TFS122B	TFS129	TFS129
TFS122C	TFS130	TFS130
TFS123	TFS131	TFS131
TFS124	TFS132	TFS132
TFS125	TFS133	TFS133

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	TFS208	TFS378
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TFS196	TFS214	TFS384
TFS184	TFS215	TFS385
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TFS186	TFS217	TFS387
TFS187	TFS218	TFS388
TFS188	TFS219	TFS389
	TFS221	TFS390
	TFS222	TFS391
	TFS223	TFS392
	TFS224	TFS393
	TFS225	TFS394

NOTE: If there is a blank variable name for 1988-89, 1991-92, or 1994-95, that particular item was not asked in that year.

Appendix B: Glossary

A. Surveys

Schools and Staffing Survey (SASS): The SASS is a unified set of surveys that facilitates comparison between public and private schools and allows linkages of teachers, schools, school districts, and administrative data. The integrated set of surveys is called the Schools and Staffing Survey (SASS). A Teacher Follow-up Survey (TFS) is conducted a year after the SASS survey to collect information on the teacher's employment and teaching status, educational activities and future plans, and opinions on school climate and job perception. The surveys are conducted by both mail and telephone.

SASS has four core components: the Teacher Demand and Shortage Survey, the School Principal Survey, the School Survey, and the School Teacher Survey. These surveys were sent to public and private schools.

The first cycle of the SASS was conducted during the 1987-88 school year followed by the 1988-89 TFS. The second cycle of the SASS was conducted during the 1990-91 school year followed by the 1991-92 TFS. The third cycle of the SASS was conducted during the school year 1993-94 followed by the 1994-95 TFS.

Teacher Follow-up Survey (TFS): An additional component of the SASS is the TFS. The TFS survey consists of a subsample of SASS, and is implemented

one
year after each SASS cycle as follows:

SASS 1987-88
TFS 1988-89

SASS 1990-91
TFS 1991-92

SASS 1993-94
TFS 1994-95

The TFS identifies and collects data from various groups of teachers who were interviewed as part of the previous SASS cycle: 1) those individuals who remain in the teaching profession, including those who remain in the same school, as well as those who have moved; and 2) those individuals who have left the teaching profession. These data are used to provide information about teacher attrition and retention in the public and private schools and to project teacher demand during the. The following teacher definitions pertain to the TFS:

Stayers: Teachers who were still teaching in the same school.
Movers: Teachers who were still teaching, but had moved to a different school.
Leavers: Teachers who left the teaching profession altogether.
Out of Scope Teachers: Teachers who left the United States or who died between the SASS and TFS cycles.

B. Terms

The following terms are defined as they apply to SASS and/or TFS.

Advanced degree: Any formal degree attained after the bachelor's degree.
Advanced degrees include master's, doctoral, and professional degrees.

Associate's degree: A degree granted for the successful completion of a sub-baccalaureate program of studies, usually requiring at least 2 years (or equivalent) of full-time college-level study. This category includes degrees granted in a cooperative or work-study program.

Baccalaureate degree: (See Bachelor's degree.)

Bachelor's degree: A degree granted for the successful completion of a baccalaureate program of studies, usually requiring at least 4 years (or equivalent) of full-time college-level study. This includes degrees granted in a cooperative or work-study program.

Census region: The four Census regions are:

Midwest: Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas;

Northeast: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania;

South: Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, Texas;

West: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, Hawaii.

Cohort: A group of individuals who share a characteristic for a given year, for example, year of graduation.

Combined elementary and secondary school: A school that encompasses instruction at both the elementary and secondary levels. Examples of combined elementary and secondary school grade spans would be grades 1-12 or grades 5-12.

Common Core of Data (CCD): CCD is the public school universe and acts as the sampling frame for the public school component of SASS. It is a group of surveys that collect public elementary and secondary education data from the 50 states, the District of Columbia, and the U.S. territories (American Samoa, Guam, Puerto Rico, Virgin Islands, and the Northern Marianas). CCD is an annual survey which collects information about staff and students in public schools at the school, district, and state levels. Revenue and expenditure data are also collected at the state level.

Computer and information sciences: A group of instructional programs that describes computer and information sciences, including computer programming, data processing, and information systems.

Doctoral degree: An earned degree carrying the title of Doctor. The Doctor of Philosophy degree (Ph.D.) is the highest academic degree and requires mastery within a field of knowledge and demonstrated ability to perform scholarly research. Other doctorates are awarded for fulfilling specialized requirements in professional fields, such as education (Ed.D.), musical arts (D.M.A.), business administration (D.B.A.), and engineering (D.Eng. or D.E.S.). Many doctor's degrees in both academic and professional fields require an earned master's degree as a prerequisite. First-professional degrees, such as M.D. and D.D.S., are not included under this heading. (See

First-professional degree.)

Dropout: An individual who has not been in school for 4 consecutive weeks or more and is not absent due to illness.

Educational attainment: The highest grade of regular school attended and completed.

Elementary school: A school that has no grade higher than eighth and at least one of grades 1 through 6; for example, schools with grades K-6, 1-3, or 6-8 are classified as elementary schools.

Elementary/secondary school: As reported in this publication, includes only regular schools (i.e., schools that are part of state and local school systems, and also most not-for-profit private elementary/secondary schools, both religiously affiliated and nonsectarian). Schools not reported include subcollegiate departments of institutions of higher education, residential schools for exceptional children, federal schools for American Indians, and federal schools on military posts and other federal installations.

Engineering and engineering technologies: Instructional programs that describe the mathematical and natural science knowledge gained by study, experience, and practice and applied with judgment to develop ways to economically use the materials and forces of nature for the benefit of humanity. Includes programs that prepare individuals to support and assist engineers and similar professionals.

English: A group of instructional programs that describes the English language arts, including composition, creative writing, and the study of literature.

Enrollment: The total number of students registered in a school unit at a particular point in time, generally in the fall of a school year.

FIPS: FIPS stands for Federal Information Processing Standards and refers to a variety of codes for standardized reference. FIPS county and state codes are developed by the National Institute for Standards and Technology (NIST) as numeric identifiers for each county and state in the United States; state codes are listed in the codebooks, while the county codes may be found in NIST publications

First-professional degree: A degree that signifies both completion of the academic requirements for beginning practice in a given profession and a level

of professional skill beyond that normally required for a bachelor's degree.
This degree is usually based on a program requiring at least 2 academic years of work prior to entrance and a total of at least 6 academic years of work to complete the degree program, including both prior required college work and the professional program itself. By NCES definition, first-professional degrees are awarded in the fields of dentistry (D.D.S or D.M.D.), medicine (M.D.), optometry (O.D.), osteopathic medicine (D.O.), pharmacy (D.Pharm.), podiatry medicine (D.P.M.), veterinary medicine (D.V.M.), chiropractic (D.C. or D.C.M.), law (J.D.), and theological professions (M.Div. or M.H.L.).

Foreign languages: A group of instructional programs that describes the structure and use of language that is common or indigenous to individuals of the same community or nation, the same geographical area, or the same cultural traditions. Programs cover such features as sound, literature, syntax, phonology, semantics, sentences, prose, and verse, as well as the development of skills and attitudes used in communicating and evaluating thoughts and feelings through oral and written language.

Free lunch eligibles: The National School Lunch Program's assistance program for low income children. Families with school-aged children who fall below the poverty level and have no other significant assets are eligible to receive government assistance in the form of free or reduced-price school lunches.

Full-time equivalent (FTE): Full-time equivalent (FTE) quantifies LEA and school staff positions in proportion to a full-time position. For example, if a full-time teacher works 35 hours per week in LEA X, then a teacher who works 21 hours would have an FTE of 0.6 in that LEA.

GED recipient: A person who has obtained certification of high school equivalency by meeting state requirements and passing an approved exam, which is intended to provide an appraisal of the person's achievement or performance in the broad subject matter areas usually required for high school graduation.
(See General Educational Development test.)

General Educational Development (GED) test: A test administered by the American Council on Education as the basis for awarding a high school equivalency certification.

Graduate: An individual who has received formal recognition for the successful completion of a prescribed program of studies.

High school: A secondary school offering the final years of high school work necessary for graduation, usually including grades 10, 11, 12 (in a 6-3-3 plan) or grades 9, 10, 11, and 12 (in a 6-2-4 plan).

Highest degree earned: If an individual has more than one degree, the degree of the highest level of educational attainment.

Humanities: Instructional programs in the following fields: area and ethnic studies, foreign languages, letters, liberal/general studies, multi/interdisciplinary studies, philosophy and religion, theology, and the visual and performing arts.

Imputation: The creation of values for survey items that should have been answered by respondents but were not. Values may be imputed by (1) using information from other items on the same data record (i.e., internal imputation), (2) extracting data from a related component of the SASS (e.g., using data from an LEA record to impute missing values to the record for a school operated by the LEA), (3) extracting data from the sample file (e.g., information about a sample case from the CCD or the Private School Survey, collected in the 1991-92 school year), or (4) extracting data from a record of another sample case with similar characteristics (i.e., donor-based imputation or the "hot deck" method of imputing for item nonresponse).

Librarian/Library Media Specialist: Staff members assigned to perform professional library service activities such as selecting, acquiring, preparing, cataloging, and circulating books and other printed materials; planning the use of the library by students, teachers, and other members of the instructional staff; and guiding individuals in their use of library books and materials that are maintained separately or as part of an instructions materials center.

Library media center: A library media center is an organized collection of printed, audiovisual, or computer resources that (a) is administered as a unit, (b) is located in a designated place or places, and (c) makes resources and services available to students, teachers and administrators.

Life sciences: Life sciences are instructional programs that describe the systematic study of living organisms. Life sciences include biology, biochemistry, biophysics, and zoology.

Limited-English-proficient: A concept developed to assist in identifying those language-minority students (children from language backgrounds other than English) who need language assistance services, in their own language or in English, in the schools.

Local education agency (LEA): An LEA, or public school district, is a government agency that employs elementary or secondary teachers and is administratively responsible for providing public elementary or secondary instruction and educational support services. Included are education agencies that do not operate schools but employ teachers, e.g., regional cooperatives that employ special education teachers who teach in schools in more than one school district. (See School district.)

Locale: The community type in which the school, principal, or teacher operates. The locale is based upon the Census definition community size and its relation to urbanized or rural places. A school's locale is determined from the ZIP code of the school, and matched to the census community size for that ZIP code.

Master's degree: A degree awarded for successful completion of a program generally requiring 1 or 2 years of full-time college-level study beyond the bachelor's degree. One type of master's degree, including the Master of Arts degree, or M.A., and the Master of Science degree, or M.S., is awarded in the liberal arts and sciences for advanced scholarship in a subject field or discipline and demonstrated ability to perform scholarly research. A second type of master's degree is awarded for the completion of a professionally oriented program, for example, an M.Ed. in education, an M.B.A. in business administration, an M.F.A. in fine arts, an M.M. in music, an M.S.W. in social work, or an M.P.A. in public administration. A third type of master's degree is awarded in professional fields for study beyond the first-professional degree, for example, the Master of Law (LL.M.) and Master of Science in various medical specialties.

Metropolitan population: The population residing in metropolitan statistical areas (MSAs). (See Metropolitan statistical area.)

Metropolitan statistical area (MSA): A large population nucleus and the nearby communities that have a high degree of economic and social integration

with that nucleus. Each MSA consists of one or more entire counties (or county equivalents) that meet specified standards pertaining to population, commuting ties, and metropolitan character. In New England, towns and cities, rather than counties, are the basic units. MSAs are designated by the Office of Management and Budget. An MSA includes a city and, generally, its entire urban area and the remainder of the county or counties in which the urban area is located. An MSA also includes such additional outlying counties that meet specified criteria relating to metropolitan character and level of commuting of workers into the central city or counties. Specific criteria governing the definition of MSAs has been developed by the U.S. Bureau of the Census.

Minority: Any racial/ethnic group other than white is considered minority.
(See Racial/ethnic group.)

Natural sciences: A group of fields of study that includes the life sciences, physical sciences, and mathematics.

Nonmetropolitan residence group: The population residing outside metropolitan statistical areas. (See Metropolitan statistical area.)

Nursery school: (See Preprimary.)

Other technical/professional fields: A group of occupationally oriented fields, other than business, computer science, education, and engineering, which includes agriculture and agricultural sciences, architecture, communications, communications technologies, home economics, law, library and archival sciences, military sciences, parks and recreation, protective services, and public affairs.

Physical sciences: Physical sciences are instructional programs that describe inanimate objects, processes, or matter, energy, and associated phenomena. Physical sciences include astronomy, astrophysics, atmospheric sciences, chemistry, geology, physics, planetary science, and science technologies.

Prekindergarten: (See Preprimary.)

Preprimary: Elementary education programs for children who are too young for first grade. The year before first grade is called kindergarten; the year(s) before kindergarten is called preschool, nursery school, or prekindergarten. Not included in prekindergarten is custodial care provided in private homes. Prekindergarten programs may be provided in regular elementary schools

(with kindergarten, first-grade, and higher-grade programs) or in preschools (with only prekindergarten programs).

Private School Survey (PSS): The PSS is a biennial survey designed to collect data from all private schools in the 50 states and the District of Columbia. It is the universe from which the sample for the private school component of SASS is selected.

Racial/ethnic group: Classification indicating general racial or ethnic heritage based on self-identification, as in data collected by the Bureau of the Census, or on observer identification, as in data collected by the Office for Civil Rights. These categories are in accordance with the Office of Management and Budget standard classification scheme presented below:

American Indian/ Alaskan Native: A person having origins in any of the original peoples of North America and maintaining cultural identification through tribal affiliation or community recognition.

Asian/ Pacific Islander: A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes, for example, China, India, Japan, Korea, the Philippine Islands, and Samoa.

Black: A person having origins in any of the black racial groups in Africa. Normally excludes persons of Hispanic origin except for tabulations produced by the Bureau of the Census, which are noted accordingly.

Hispanic: A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

White: A person having origins in any of the original peoples of Europe, North Africa, or the Middle East. Normally excludes persons of Hispanic origin except for tabulations produced by the Bureau of the Census, which are noted accordingly.

Reentrants: Teachers who left the school system for a period of time, and have now returned to classroom teaching.

Salary: The total amount regularly paid or stipulated to be paid to an individual, before deductions, for personal services rendered while on the payroll of a business or organization.

Scholastic Assessment Test (SAT): An examination administered by the Educational Testing Service and used to predict the facility with which an individual will progress in learning college-level academic subjects.

School climate: The social system and culture of the school, including the organizational structure of the school and values and expectations within it.

School district: An education agency at the local level that exists primarily to operate public schools or to contract for public school services. Synonyms are "local basic administrative unit" and "local education agency."

School year: The 12-month period of time denoting the beginning and ending dates for school accounting purposes, usually from July 1 through June 30.

Schools

Alternative school: Alternative schools serve students whose needs cannot be met in a regular, special education, or vocational school. They provide nontraditional education and may serve as an adjunct to a regular school.

They fall outside of the categories of regular, special education, and vocational education, although they may provide similar services or curriculum. Some examples of alternative schools are those for potential drop-outs, residential treatment centers for substance abuse (if they provide elementary or secondary education), and schools for chronic truants.

BIA school: BIA schools are funded by the Bureau of Indian Affairs, U.S. Department of Interior. These schools may be operated by the BIA, a tribe, a private contractor, or an LEA (or school district).

Combined school: A combined school has one or more of grades K-6 and one or more of grades 9-12; for example, schools with grades K-12, 6-12, 6-9, or 1-12 are classified as combined schools. Schools in which all students are ungraded (i.e., not classified by standard grade levels) are also classified as combined.

Elementary school: A school is classified as elementary if it has no grade higher than eighth and at least one of grades 1 through 6; for example, schools with grades K-6, 1-3, or 6-8 are classified as elementary schools.

Indian school: An Indian school is a school funded by the Bureau of Indian Affairs (BIA) that is not operated by an LEA. An Indian school may be operated by the BIA, a tribe, or a private contractor.

Native American school: Public schools where 19.5 percent or more of the students are American Indian or Alaskan Native, as reported in the 1991-

CCD. This classification was used in stratifying the SASS public school sample in order to improve estimates of the Native American student population.

Private school: A private school is a school that is not supported primarily by public funds (i.e., it is not a public school). It must provide instruction for one of more of grades 1 through 12 (or comparable ungraded levels), have one or more teachers and be located in a building that is not used primarily as a private home. Organizations or institutions that provide support for home schooling but do not offer classroom instruction for students are not included.

Private School Typology: Private schools were assigned to one of three major categories and, within each major category, one of three subcategories. The categories and subcategories are:

1. Catholic: parochial, diocesan, and private; 2. Other religious: affiliated with a conservative Christian school association, affiliated with a national denomination, and unaffiliated; and 3. Nonsectarian: regular, special program emphasis, and special education.

Public school: A public school is an institution that provides educational services for at least one of grades 1 through 12 (or comparable ungraded levels), has one or more teachers, is located in one or more buildings, and is supported primarily by public funds. State schools (e.g., schools for the deaf or the blind), schools in juvenile detention centers, and schools located on military bases and operated by the Department of Defense are included.

Secondary school: A school is classified as secondary if it has no grade less than seventh and at least one of grades 7 through 12; for example, schools with grades 9-12, 7-8, 10-12, or 7-9 are classified as secondary schools. Both junior high schools and senior high schools are included.

Special education school: Special education schools provide educational services to students with special physical or mental needs (i.e., students with mental handicaps [such as mental retardation or autism], physical handicaps [such as hearing-impairment], or learning disabilities [such as dyslexia]).

Vocational school: Vocational schools primarily serve students who are being trained for semi-skilled or technical occupations.

Science: The body of related courses concerned with knowledge of the physical and biological world and with the processes of discovering and validating this knowledge.

Social and behavioral sciences: A group of scientific fields of study that includes anthropology, archeology, criminology, demography, economics, geography, history, international relations, psychology, sociology, and urban studies.

Social studies: A group of instructional programs that describes the substantive portions of behavior, past and present activities, interactions, and organizations of people associated together for religious, benevolent, cultural, scientific, political, patriotic, or other purposes.

Staff assignments, elementary and secondary school:

District administrative support staff: Personnel who are assigned to the staffs of the district administrators. They may be clerks, computer programmers, and others concerned with the functioning of the entire district.

District administrators: The chief executive officers of education agencies (such as superintendents and deputies) and all others with district-wide responsibility. Such positions may be business managers, administrative assistants, coordinators, and the like.

Guidance counselors: Professional staff whose activities involve counseling students and parents, consulting with other staff members on learning problems, evaluating the abilities of students, assisting students in personal and social development, providing referral assistance, and working with other staff members in planning and conducting guidance programs for students.

Instructional (teacher) aides: Those staff members assigned to assist a teacher with routine activities associated with teaching (i.e., those activities requiring minor decisions regarding students, such as monitoring, conducting rote exercises, operating equipment, and clerking). Volunteer aides are not included in this category.

Librarians: Staff members assigned to perform professional library service activities such as selecting, acquiring, preparing, cataloging, and circulating books and other printed materials; planning the use of the library by students, teachers, and other members of the instructional staff; and guiding individuals in their use of library books and materials that are maintained separately or as part of an instructional materials center.

Other support services staff: All staff not reported in other categories. This group includes media personnel, social workers, data processors, health maintenance workers, bus drivers, security, cafeteria workers, and other staff.

School administrators: Those staff members whose activities are concerned with directing and managing the operation of a particular school. They may be principals or assistant principals, including those who coordinate school instructional activities with those of the LEA and other appropriate units.

Teacher: A teacher is any full-time or part-time school staff member who teaches one or more regularly scheduled classes in any of grades K-12 (or comparable ungraded levels). In addition to regular full-time teachers, the following types of teachers are also included: (1) itinerant teachers, (2) long-term substitutes who fill the role of a regular teacher on a long-term basis, and (3) administrators, counselors, librarians, and other professional or support staff who teach any regularly scheduled classes, and (4) other part-time teachers. Short-term substitute teachers and student teachers are not included. This 1993-94 definition differs from the previous cycles. In the 1987-88 and the 1990-91 surveys, a teacher was defined as a school staff member whose primary assignment was teaching in any of grades K-12. School staff whose primary assignment was something other than teaching were excluded, even if they taught some regularly scheduled classes.

Teacher, first-time: Individuals who are teaching full time for the first time. These teachers include recent college graduates, former substitute teachers, or individuals who had other jobs besides teaching either inside or outside the field of education.

Teacher, itinerant: An itinerant teacher teaches at more than one school (e.g., a music teacher who teaches three days per week at one school and two days per week at another).

Teachers, newly hired: Teachers who were newly hired by the LEA (public) or school (private and Indian). They include teachers returning from unpaid leave of absence of one school year or more, but not substitute teachers.

Technical/professional fields: A group of occupationally oriented fields of study, other than engineering and computer science, that includes agriculture and agricultural sciences, architecture, business and management, communications, education, health sciences, home economics, law, library and archival sciences, military sciences, parks and recreation, protective services, and public affairs.

Truant: An individual who has not been in school for 4 consecutive weeks or more and is not absent due to illness.

Tuition and fees: A payment or charge for instruction or compensation for services, privileges, or the use of equipment, books, or other goods.

Ungraded students: Ungraded students are those not assigned to a particular grade level (kindergarten, first grade, second grade, etc.); for example, special education centers and alternative schools often classify their students as ungraded. Students in Montessori schools are also considered ungraded if the school assigns them to "primary" and "intermediate" levels instead of specific grades.

Urbanicity: School location is categorized based on the classification in both the Common Core of Data (CCD) and the Quality Education data (QED), as drawn from U.S. Census data and definition. The results are summarized in three levels:

1. Central city: central city of an MSA (Metropolitan Statistical Area). 2.

Urban fringe/large town: area surrounding a central city but within a county constituting an MSA. 3. Rural/small town: outside an MSA.

Withdrawn: An individual who has not been in school for 4 consecutive weeks or more and is not absent due to illness.

Resources

U.S. Department of Education. National Center for Education Statistics. Characteristics of Stayers, Movers, and Leavers: Results from the Teacher Followup Survey: 1994-95, NCES 96-274 (E.D. TABS), by Summer D. Whitener, Kerry J. Gruber, Hilda Lynch, Kathryn Tingos, Mia Perona, Sharon E. Fondelier. Washington, D.C.: 1997.

U.S. Department of Education. National Center for Education Statistics.

_The
Condition of Education_, NCES 96-304, by Thomas M. Smith. Washington,
D.C.:
1996.

U.S. Department of Education. National Center for Education Statistics.
_Programs and Plans of the National Center for Education Statistics -
1995
Edition_, NCES 95-133, edited by Celestine Davis and Bill Sonnenberg.
Washington, D.C.: 1995

U.S. Department of Education. National Center for Education Statistics.
_SASS
and PSS Questionnaires 1993-94_. NCES 94-674. Washington D.C.: 1994.

U.S. Department of Education. National Center for Education Statistics.
_SASS
and TFS Questionnaires 1990-91_. NCES 94-441. Washington D.C.: 1994.

U.S. Department of Education. National Center for Education Statistics.
_SASS
and TFS Questionnaires 1987-88_. NCES.

U.S. Department of Education. National Center for Education Statistics.
_1993-94 School and Staffing Survey Data File User's Manual, Volume 1:
Survey
Documentation_, NCES 96-142, by Kerry J. Gruber, Carol L. Rohr, and
Sharon E.
Fondelier. Washington, D.C.: 1996

Appendix C: Other Publications of Interest

The following publications are available in print form, as are the
following
SASS/TFS data products which also will be helpful to researchers using
SASS/TFS data.

The eight SASS and TFS user's manuals provide comprehensive information
useful
in understanding the complexities of the SASS surveys. Selected user's
manuals can be found on the SASS and TFS CD-ROM (as indicated by the *)
and
include:

1993-94 Schools and Staffing Survey: Data File User's Manual Volume I:
Survey
Documentation (NCES 96-142) *
1990-91 Schools and Staffing Survey: Data File User's Manual Volume I:
Survey
Documentation (NCES 93-144-I) *
1990-91 Schools and Staffing Survey: Data File User's Manual Volume II:
Restricted-use Codebook (NCES 93-144-II)
1990-91 Schools and Staffing Survey: Data File User's Manual Volume
III:
Public-use Codebook (NCES 93-144-III)
1987-88 Schools and Staffing Survey: Data File User's Manual: Survey
Documentation *
1994-95 Teacher Follow-Up Survey Data File User's Manual--Restricted-use
Version *
1991-92 Teacher Follow-Up Survey Data File User's Manual--Public-use

Version

(NCES 94-331) *
1991-92 Teacher Follow-Up Survey Data File User's Manual--Restricted-use
Version (NCES 94-478)
1988-89 Teacher Follow-Up Survey Data File User's Manual--Public-use
Version
(NCES 92-058) *

Forthcoming User's Manuals:

1993-94 Schools and Staffing Survey: Data File User's Manual Volume II:
Restricted-use Codebook
1993-94 Schools and Staffing Survey: Data File User's Manual Volume
III:
Public-use Version Codebook

Questionnaires:

SASS and PSS Questionnaires 1993-94 (NCES 94-674)
Teacher Follow-up Survey Questionnaire for Former Teachers (TFS 2)
Teacher Follow-up Survey Questionnaire for Current Teachers (TFS 3)
SASS and TFS Questionnaires 1990-91 (NCES 94-441)
SASS and TFS Questionnaires 1987-88

Methodology:

1993-94 Schools and Staffing Survey: Sample Design and Estimation
(Technical
Report, NCES 96-089)
An Exploratory Analysis of Nonrespondents in the 1990-91 Schools and
Staffing
Survey (NCES 96-338)
Design Effects and Generalized Variance Functions for the 1990-91 Schools
and
Staffing Surveys (SASS) Volume I -- User's Manual (NCES 95-342-I)
Design Effects and Generalized Variance Functions for the 1990-91
Schools and
Staffing Surveys (SASS) Volume II -- Technical Report (NCES 95-342-II)
Quality Profile for SASS: Aspects of the Quality of Data in the Schools
and
Staffing Survey (Technical Report, NCES 94-340)
1990-91 Schools and Staffing Survey: Sample Design and Estimation
(Technical
Report, NCES 93-449)
Modeling Teacher Supply and Demand, with Commentary (Research and
Development
Report, NCES 93-461)
1987-88 Schools and Staffing Survey: Sample Design and Estimation
(Technical
Report, NCES 91-127)

Reports:

Schools and Staffing in the United States: A Statistical Profile: 1993-
94
(NCES 96-124)
Private Schools in the United States: A Statistical Profile, 1990-91

(NCES 95-348)
Characteristics of American Indian and Alaskan Native Education, Results
from
the 1990-91 SASS (NCES 95-735)
Schools and Staffing in the United States: A Statistical Profile: 1990-
91
(NCES 93-146)
Schools and Staffing in the United States: A Statistical Profile: 1987-
88
(NCES 92-120)
Characteristics of American Indian and Alaskan Native Education, Results
from
the 1993-94 SASS (forthcoming)
Private Schools in the U.S.: A Statistical Profile, 1993-94
(forthcoming)

NCES Working Papers Related to SASS:

WP 94-01 Schools and Staffing Survey (SASS). Papers presented at the
meetings
of the American Statistical Association:

Survey research methods, August 1992:

"The Schools and Staffing Survey: Research Issues"
"The School and Staffing Survey: How Reinterview Measures Data Quality"
"Mail Versus Telephone Response in the 1991 Schools and Staffing
Surveys"
"Questionnaire Research in the Schools and Staffing Survey: A Cognitive
Approach"
"Balance Half-Sample Replication with Aggregation Units"
"Characteristics of Nonrespondents in the Schools and Staffing Surveys'
School
Sample"
"Improving Reliability and Comparability on NCES Data on Teachers and
Other
Education Staff"

Survey research methods, August 1993:

"Generalized Variance Functions for the Schools and Staffing Surveys"
"A Bootstrap Variance Estimator for the Schools and Staffing Survey"
"Adjusting for Nonresponse Bias of Correlated Items Using Logic
Regression"
"Comparisons of School Locale Setting: Self-Reported Versus Assigned"
"Characteristics of Nonrespondents to the 1990-91 Schools and Staffing
Survey"

WP 94-02 "Generalized Variance Estimates for Schools and Staffing
Survey
(SASS)"

WP 94-03 "1991 Schools and Staffing Survey (SASS) Reinterview Response
Variance Report"

WP 94-04 "The Accuracy of Teachers' Self-report on Their Postsecondary
Education: Teacher Transcript Study, Schools and Staffing Survey"

WP 95-01 Schools and Staffing Survey: 1994. Papers presented at the
1994

Meeting of the American Statistical Association:

Estimation Issues in School Surveys:

"Intersurvey Consistency in School Surveys"

"Estimation Issues Related to the Student Component of the SASS"
"Properties of the Schools and Staffing Survey's Bootstrap Variance Estimator"
"Optimal Periodicity of a Survey: Sampling Error, Data Deterioration, and Cost"

Response And Coverage Issues in School Surveys:

"Some Data Issues in School-Based Surveys"
"The 1991-92 Teacher Follow-up Survey Reinterview and Extensive Reconciliation"
"Improving Coverage in a National Survey of Teachers"
"Improving the Coverage of Private Elementary-Secondary Teachers"
"Improving the Coverage of Private Elementary-Secondary Schools"

Education Research Using the Schools and Staffing Surveys and the National

Education Longitudinal Study:

"Adding Value to the Value-Added Educational Production Function Specification"
"Teacher Quality in Public and Private Schools"
"Teacher Shortages and Teacher Quality"
"Work Experience, Local Labor Markets, and Dropping out of High School"

WP 95-16 "Intersurvey Consistency in NCES Private School Surveys"

WP 96-02 Selected papers presented the meeting of the 1995 American Statistical

Association: Design Estimation Issues for School Based Surveys:
"Properties of the Schools and Staffing Survey's Bootstrap Variance Estimator"

Data Quality and Nonresponse in Education Surveys:

"Multivariate Modeling of Unit Nonresponse for 1990-91 Schools and Staffing Surveys"
"Variance Estimates Comparison by Statistical Software."

These products are available without cost from:

U.S. Department of Education
National Center for Educational Statistics
SASS Data Products
555 New Jersey Avenue, N.W., Room 422
Washington, D.C. 20208-5651

Appendix D: References

1. U.S. Department of Education. National Center for Education Statistics.
1993-94 Schools and Staffing Survey: Data File User's Manual, Volume I: Survey Documentation. NCES 96-142, by Kerry J. Gruber, Carol L. Rohr, and Sharon E. Fondelier. Washington D.C.: 1996.
2. U.S. Department of Education. National Center for Education Statistics.
1993-94 Schools and Staffing Survey: Sample Design and Estimation. NCES 96-089, by Robert Abramson, Cornette Cole, Sharon E. Fondelier, Betty Jackson,

and Randall Parmer. Washington D.C.: 1996.

3. U.S. Department of Education. National Center for Education Statistics.
1990-91 Schools and Staffing Survey: Data File User's Manual, Vol. I: Survey Documentation. NCES 93-144-I, by Kerry J. Gruber, Carol L. Rohr, and Sharon E. Fondelier. Washington, D.C.: 1994.
4. U.S. Department of Education. National Center for Education Statistics.
1987-88 Schools and Staffing Survey: Public and Private Teacher Demand and Shortage Questionnaires, Base Year: Data File Users Manual. NCES 91-021g. Washington, D.C.: 1991.
5. U.S. Department of Education. National Center for Education Statistics.
Characteristics of Stayers, Movers, and Leavers: Results from the Teacher Followup Survey: 1994-95. NCES 97-450, by Summer D. Whitener, Kerry J. Gruber, Hilda Lynch, Kathryn Tingos, Mia Perona, and Sharon E. Fondelier. Washington, D.C.: 1997.
6. U.S. Department of Education. National Center for Education Statistics.
Design Effects and Generalized Variance Functions for the 1990-91 Schools and Staffing Survey (SASS), Volume I, User's Manual. NCES 95-342-I, by Sameena Salvucci, Stanley Weng. Washington, D.C.: 1995.
7. U.S. Department of Education. National Center for Education Statistics.
Design Effects and Generalized Variance Functions for the 1990-91 Schools and Staffing Survey (SASS), Volume II, Technical Report. NCES 95-342-II, by Sameena Salvucci, Robert Holt, Ramal Moonesingle. Washington, D.C.: 1995.
8. U.S. Department of Education. National Center for Education Statistics.
A Guide to Using NELS:88 Data. by Jeff Owings et al. Washington, D.C. 1994.
9. U.S. Department of Education. National Center for Education Statistics.
An Overview of the SASS and TFS. NCES 94-440. Washington D.C.: 1994.
10. .U.S. _Department of Education. National Center for Education Statistics.
An Overview of the Schools and Staffing Survey (SASS). NCES 96-081. Washington D.C.: 1996.
11. U.S. Department of Education. National Center for Education Statistics.

SASS and TFS Questionnaires 1990-91. NCES 94-441. Washington D.C.: 1994.

12. U.S. Department of Education. National Center for Education Statistics.
SASS and PSS Questionnaires 1993-94. NCES 94-674. Washington D.C.: 1994.

13. U.S. Department of Education. National Center for Education Statistics.
Schools and Staffing in the United States: A Statistical Profile, 1993-94.
NCES 96-124, by Robin R. Henke, Susan P. Choy, Sonya Geis, and Stephen P. Broughman. Washington, D.C.: 1996.

Appendix E: Variable names for 1990-91 SASS district and school files with corresponding questionnaire source code numbers.

All of the variables in the 1990-91 SASS had to be named because a variable that was the same on the District file and the Private School file had conflicting source code numbers. By naming the variables, a variable called by name will be accessed no matter which file(s) it is on. This is an aid in programming, however, it can cause problems when trying to find out which file a variable is/is not on. This appendix has been created to be an aid in this task and can be read into LOTUS or EXCEL as a comma delimited file. This file can then be sorted by any of the 3 columns of source codes so that the list can be in District, Public School, or Private School order. Also, you can see which file(s) a field is a part of (ex: District and Private School). The headings are also in the comma delimited format so you will have the data properly labeled. Use the source code(s) (ex. SC011) to find the appropriate question in the questionnaire (found in the Data File User's Manual for each cycle. See the Technical Manual for ordering information.) The comma delimited file can be found on the CD-ROM under the \DOC directory. The file name is "APPENDXE.TXT".

Appendix F: Warnings and notes about working with the CD-ROM and ECB

1. This CD-ROM contains the latest versions of the data for all SASS and TFS cycles. The SASS 1987-88 and TFS 1988-89 files have been imputed since the last version of this data was released.
Created variables from the SASS 1993-94 and TFS 1994-95 cycle have been

computed and added to the SASS 1987-88 and 1990-91, and the TFS 1988-89 and 1991-92 files to match the SASS 1993-94 and TFS 1994-95 specifications. The data for all previously released cycles of SASS and TFS have also been cleaned since their last release (invalid responses changed or reported as missing, 'no longer valid' responses changed to the current value, etc.), meaning that frequencies and univariates from this data may differ slightly from results obtained from earlier releases for this data. In addition, there are several variables in several different files that have idiosyncracies (valid responses that had no respondents (a block of questions in TFS 1988-89 (TFS062 through TFS076) where no one responded 'very dissatisfied'), or obviously out of range values (one teacher has TOTEXPER=192 in the SASS 1987-88 teacher file, by summing FTPUB, PTPUB, FTPVT, and PTPVT)) that could not be cleaned, since the original questionnaires have been destroyed. Variables that could not be verified are unchanged from the previous releases of the data. The data on this CD-ROM supersedes any earlier versions of these datasets.

2. Due to the limitations of the electronic codebook software, responses to questions may be severely abbreviated or truncated. For many questions, the complete list of responses appears in the question's description window. For questions that do not include all possible responses, please refer back to the original questionnaire to obtain the complete response. Additional copies of the questionnaire publications may be obtained from NCES.

3. All SASS/TFS files are already sorted in ascending order by "SURVEY" and "CNTLNUM" and do not need to be pre-sorted before merging.

4. When "merging" public and private school data or public and private school principal data or public and private school teacher data, use "SECTOR" for the "merge" variable. This will actually be a "Set Public Private" statement which will append the private data to the public data into one file.

5. When merging school data with teacher and administrator data within

each cycle, use "SCHCNTL" for the merge variable and sort the files by "BY SCHCNTL".

6. All SAS-PC and SPSS program code generated by the ECB should be edited. While most of the program code is functional, users may wish to change output file names and some labels. SPSS code for FREQUENCIES and DESCRIPTIVES are included even if no variables are listed; delete such entries. SAS code includes a FORMAT statement.

***A number of variables were recoded to give more meaningful information. Several variables, notably ones dealing with the number of dependent children, other dependent adults, and number of breaks in service, were recoded to report a frequency, but are actually continuous variables on the flat data file. The unedited SAS code will RUN a frequency on these variables, with improper labels, yielding unintended results. Simply change the frequency to a univariate in the code to receive more conventional output.

7. After installing the Electronic Codebooks onto your hard drive, the DOS version will require you to make a number of setting adjustments

(such as CD-ROM drive letter, destination directory for output program code, etc.), but there is no such requirement for the windows ECB. By changing many of the default settings, you will reduce the amount of editing that will need to be done to any output program code.

After starting the ECB, go into the 'file' menu and select 'setup'. You may now adjust the output directory and CD-ROM drive letter that will be inserted in the generated code, eliminating the need to edit these lines in the ECB created program.

8. Each TFS observation has the entire original teacher record attached. Remember, all TEACHER data (TSC###/T####) refers to the SASS cycle years and TFS data (TFS###) refers to one year later.

9. Caution: The SASS 1987-88 and TFS 1988-89 College Major listing is different from subsequent survey cycles.

10. The ECB does not show frequencies for "0" responses. Two variables in the TFS 1988-89 (TSC111 and TSC123) seem to disappear because of this situation. For both of these records there is a frequency of 170 who responded "0" and the rest are missing (.).

11. When using the Windows version of the ECB, scrolling down using the arrow column on the right side of the window will not give you the new 'SECTION' header until you place your cursor on a variable. This does not mean that you have to TAG a variable to get the SECTION header, just use your mouse and click on the variable (not the box to the left of the variable) and you will see the header change when appropriate. This is especially important if you leave one questionnaire and begin another, for example, you can browse from the Private Administrator file into the Public School file without the header changing.

12. TFS 1988-89 Public Teacher file, TUITIN is represented as a frequency-

- 1 = Public schools that charge tuition
- 2 = Public schools that did not respond to the question
- BLANK = Public schools where the question did not apply.

On the flat data file, this variable is continuous, and the unedited extract code will give a frequency-resulting in a large volume of unexpected output. By recoding the one school that did not respond to the question with a value of missing and changing the frequency to a univariate, the user will receive much more useful output. The current record for the school that did not respond contains 99999 in the TUITIN field.

13. In all prior releases of SASS/TFS data, the imputation flags were named "F_Varname". All of the flags are now named "FVarname" (the underscore after the F has been removed) to retain the full name of the flag for the SAS format created when SAS code is generated. There are several variables (and their flags) in TFS 1988-89 that had a letter appended to the end of the variable name. The variables affected were: TFS027, TFS029, TFS121, and TFS122. Their imputation flags are represented by dropping the 'S' from their name as well as the underscore (ex. FTF027B).

14. In the 1987-88 SASS, a separate "District" level questionnaire was sent to the private schools in the sample, which is represented in the Private District file. Some of these questions have been collapsed to

insure the confidentiality of the school. This file can be linked to any of the other 1987-88 private SASS files using "LEACNTL".

15. All of the data files (*.DAT) can be found on the CD-ROM under the \DATA subdirectory. These files are not copied to the root directory through the install program; however for repeated RUNs of similar programs, an extract file may be downloaded to your PC from the flat data file on the CD-ROM. This will greatly increase the speed of execution of your programs. Further information regarding downloading may be found in the respective file in the "PROGCOMP" folder.

16. The Teacher Followup Survey consists of two separate questionnaires; The Questionnaire for Former Teachers, and the Questionnaire for Current Teachers. Some former teacher questions follow current teacher questions in the TFS 1994-95 cycle ECB. This was done because there are question numbers that were duplicated in both the current teacher and former teacher questionnaires. Therefore, some variables were named and placed after the current teacher variables in the ECB. The variables that are represented by CHILDNUM, AGEYOUNG, OTHERDEP, and OTHERNUM (Former teacher questions: source code 090, 092, 093, 094, Current teacher questions: source code 386, 387, 388, 389) represent current and former teacher data. To properly separate current and former teacher data, use the following SAS example: 'Tables CHILDNUM * TSTATUS * SURVEY;'.

17. A number of variables were collapsed, had percentages reported, or were otherwise re-categorized for the public-use version of this CD-ROM from the restricted-use data. Every effort has been made to ensure that the proper documentation appears with each variable in their respective description windows. It may be necessary to scroll through the entire window to see how that variable was manipulated, or to view the code that was used to categorize, or in some cases re-categorize the variable. Ex.-AGE and HOUSINC in all ECBs.

18. When the uninstall program for the SASS/TFS CD-ROM is executed, it deletes the engine that RUNs the electronic codebooks. This means

will delete the engine that runs any other ECBs along with all parts of the SASS/TFS CD-ROM. In order to avoid this, you can delete the individual folders (SA1, TF2, etc.), leaving the programs in the ECBW folder alone. This will cause some paths in the start menu to become non-responsive, but it will free up space on the hard drive, and will enable you to use any other ECBs. If the engine is accidentally deleted, you may restore it by reinstalling any of the other ECBs, or by reinstalling the engine from the SASS/TFS CD-ROM, by choosing custom install and deselecting all individual codebooks, so that only the engine is installed.

19. Extreme caution should be used when merging two files together as unexpected results may occur. For example, if the following code is used:

```
DATA MERGED;  
MERGE TEACHER (IN=A) SCHOOL (IN=B);  
IF A AND B;  
BY SCHCNTL;  
RUN;
```

The resultant data file will contain only teachers with schools that responded to the survey, and will eliminate all teacher records for teachers whose schools did not respond to the survey. By substituting "IF A"; in the earlier code, you will retain all teachers, while merging school data onto teacher records for teachers with schools. Other hazards include overwriting sampling data (by merging the entire school file onto the teacher file, the sampling variables from the school file will overwrite the sampling variables from the teacher file-a suggestion is to merge only the variables you need for analysis onto the 'merged' data set); merging many to one or one to many (as is the case with several teachers from one school, use caution on which direction you merge); creating computed variables in a merge statement in SAS can yield unexpected results (the recommended procedure is to create your merged data set and then compute the new variables in a work data set). If you have any question about the integrity of your merged data set, compare the total number of records both before and after the merge, so you know that the merge was

successful.

20. In previous releases of the SASS and TFS data files, teachers and administrators whose schools did not respond to the school survey had a missing value for SCHCNTL. In this release of the data, SCHCNTL has been inserted in the record, enabling the researcher to merge administrators with teachers, even if their respective school did not respond to the questionnaire.

21. There are slight differences between the weighted count of TFS 1994-95 public school teachers in this CD-ROM datafile and the published figures from "Characteristics of Stayers, Movers, and Leavers: Results from the Teacher Followup Survey, 1994-95." The unweighted number of public school teachers in the current datafile has 4,528 teachers, rather than 4,525. The latter number of teacher records was used to generate all of the data for the report. The 3 teachers were erroneously categorized during processing as Bureau of Indian Affairs (BIA) teachers, although they were actually public school teachers working in BIA schools. When the 3 teacher records are added to the public school teacher file, the weighted number of public school teachers changes from 2,555,781 to 2,556,113 in Tables A and B of "Characteristics of Stayers, Movers, and Leavers." The remaining data shown in the report did not change, as the percent change due to this error is so small as not to affect overall percentage distributions.

22. FOR THE PUBLIC USE CD-ROM ONLY: Certain variables about District policies in the SASS 1993-94 were moved from the District (TDS) file to the Public School file. Those variables can be identified on the ECB by the "District Policies" or "District Teachers" header. These correspond to similar questions on the private school questionnaire. These questions reflect school employment policies, compensation and training. Note that these questions were pulled onto the school questionnaire only in the SASS 1993-94 school file, and not in previous cycles. These variables were removed from the District ECB and flat data file, their names changed (from a leading D to a leading S-ex. D0995 to S0995), however the question may be found in the District questionnaire.

23. FOR THE RESTRICTED USE CD-ROM ONLY: For all files, APIN and NCESSCH were merged onto the file to enable the researcher to merge with Common Core of Data (CCD, for public schools) and Private School Survey (PSS, for private schools) directly from each file. In previous releases of the data files, these two merge variables were only on the school file, so if a teacher's or administrator's school did not respond to the survey, there was no way to link these administrators or teachers to CCD or PSS. Currently, it is possible to merge directly from any file. LEAID (for public school districts) and APIN names are the same on both surveys; NCESSCH is called CCDIDSCH in the CCD file. These variables may also be used to merge across cycles within the Schools and Staffing and Teacher Follow-up Surveys. There is substantial overlap between cycles (87-88 to 90-91 to 93-94) for trends schools, administrators, and teachers, so that an analysis of may be performed.

24. FOR THE RESTRICTED USE CD-ROM ONLY: In the SASS 1987-88 TDS file, there are two sets of replicate weights. LEAWGTL and REPWTL1-REPWTL48 should be used for all analysis on the district-based variables (for both public school districts and the similar questions asked of the private schools, contained in the private TDS file). These weights are to be used solely on the TDS files. LEAWGTS and REPWTS1-REPWTS48 were created for analysis on district-based information where the school and district files have been merged together. For example, if you wish to look at the number of public schools that offer a cash bonus to teachers who teach in less desirable locations (Public TDS variable DSC091), you would first merge the district information onto the school file (sort and merge by LEACNTL), and weight with LEAWGTS to give national totals.

25. An electronic version of the original printed codebooks appears in the DOC folder on this CD-ROM for all files within each cycle of SASS and TFS. They are included as an aid to the researcher for reference to the original questions and responses, not as a reference to the frequencies and univariates for the data on this CD. The data has been imputed and/or cleaned since the release of the printed

codebooks and

analysis you perform will not necessarily match the information
in the

printed codebook. Please refer to the electronic codebook for
confirmation of frequencies and univariates.

The Schools and Staffing Survey (SASS) and Teacher Followup Survey (TFS) CD-ROM: Electronic Codebook and Public-Use Data for Three Cycles of SASS and TFS

I. Schools and Staffing Survey and the Teacher Followup Survey

The Schools and Staffing Survey (SASS) is an integrated set of surveys of public and private schools, principals, teachers, and school districts throughout the United States. These surveys are designed to collect data on, among other issues, the educational qualifications of school teachers and principals, and the working conditions of teachers. All three cycles of SASS consist of four separate surveys administered simultaneously to linked samples of respondents. These surveys are: the Teacher Demand and Shortage Survey (TDS: School District data), the School Principal Survey, the School Survey, and the School Teacher Survey.

The TDS Questionnaire obtains data from local education agencies (LEAs) that can be used to measure the supply and demand for public school teachers and to examine policies that may influence teacher supply and demand, e.g., salary, retirement plans, incentive plans. The School Principal Questionnaire obtains information about the training, experience, professional background, and demographic characteristics of school principals and about the types of school problems that principals view as serious. The School Questionnaire collects information on the characteristics of schools, e.g., enrollment, student-staff ratios, programs and services offered, and length of school day. The School Teacher Questionnaire collects data that can be used to describe America's teachers—their demographic characteristics, education, experience, and teaching assignments, as well as their perceptions and attitudes about workplace conditions, their jobs, and teaching in general. This CD-ROM contains the results of all three data collections (1987-88, 1990-91, and 1993-94).

The Teacher Followup Survey (TFS) is a one-year followup of a sample of teachers who were originally selected for the Teacher Questionnaire in the SASS. These surveys are designed to collect data on stayers, teachers who remain teaching at the same school from year to year; movers, teachers who move from one school to another; and leavers, teachers who left the profession between one school year and the next. Within this data, there are some

questions that are drawn directly from the previous year's SASS. These data are termed 'base year' because the SASS sample is the base for the teachers who are selected for the TFS Questionnaire. Base year characteristics include personal and professional descriptors of the teacher (age, gender, race, field of teaching assignment), as well as characteristics of the school in which the teacher worked the previous year (public or private school, region, locale). Since the TFS sample was drawn from the original SASS sample, the records for each teacher contain both the original teacher questionnaire questions and responses from SASS, as well as the TFS questions and responses.

Data from the TFS can be used to compare public and private teachers' job satisfaction, as well as movement within and out of the teaching profession. For example: How do teachers who remain teaching at the same school from year to year (stayers) compare with those who don't? How many teachers move from one school to another (movers)? What percentage of teachers are leaving the profession between one year and the next (leavers)? For teachers who leave the profession, TFS asks about their occupational status (working, retired, or caring for family members?) or whether they are seeking further education, and reasons for leaving teaching, as well as recommendations for how schools might retain teachers. Those who remain in teaching are asked about changes in teaching assignment, opinions about retaining teachers, and retirement plans. Both current and former teachers are asked for their current family income. Teachers who move from one school to another are asked to describe the type of school to which they moved. This CD-ROM contains the results of all three data collections (1988-89, 1991-92, and 1994-95).

Please refer to the documentation contained in the programmer's companion in the DOC folder on this CD-ROM for the exact layout of the variables.

The data on this CD-ROM contain the following record counts per questionnaire for each cycle of SASS and TFS:

SASS 1987-88	
Public District	4,826 observations
Private District	2,095 observations
Public Administrator	8,519 observations
Private Administrator	2,436 observations

Public School	8,326 observations
Private School	2,459 observations
Public Teacher	40,593 observations
Private Teacher	6,764 observations
SASS 1990-91	
Public District	4,884 observations
Public Administrator	9,054 observations
Private Administrator	2,757 observations
Public School	8,969 observations
Private School	2,620 observations
Public Teacher	46,705 observations
Private Teacher	6,642 observations
SASS 1993-94	
Public District	4,993 observations
Public Administrator	9,098 observations
Private Administrator	2,743 observations
Public School	8,767 observations
Private School	2,585 observations
Public Teacher	47,105 observations
Private Teacher	8,372 observations
TFS 1988-89	
Public Teacher	4,812 observations
Private Teacher	1,951 observations
TFS 1991-92	
Public Teacher	4,761 observations
Private Teacher	1,972 observations
TFS 1994-95	
Public Teacher	4,528 observations
Private Teacher	1,751 observations

These are the number of sampled and interviewed cases. Weighted counts are obtained by running an extract program and using a "final weight" variable.

II. Getting Started (Windows Version)

The following are the hardware requirements and installation procedures for the Windows-based Electronic Codebook (ECB).

A. Hardware Requirements

The SASS/TFS ECB is designed to operate on an IBM PC or compatible computer (386 or better) with:

1. At least 8 Megabytes of RAM.
2. A hard disk drive with at least 4 Megabytes free for installation.
Additional hard disk space will be required for storage of downloaded

data; the amount of disk space required will vary depending on the number of variables selected during the ECB session.

3. CD-ROM reader with appropriate controller and interface cable for your PC.

4. Windows version 3.1 or higher.

B. Installation

1. To begin the installation process, insert the SASS/TFS ECB CD-ROM into your CD-ROM drive.

WINDOWS 95 USERS:

In WINDOWS EXPLORER, click on the drive where your CD-ROM operates. The root directory of this drive will contain the executable file "setup.exe"; double click on this file to begin the installation process. Opening the RUN dialogue and typing the full path to the file "setup.exe" can also start the installation process. The RUN dialogue is accessible by clicking the START button and choosing the second icon from the bottom labeled "Run..". If E is the drive letter where you have loaded the ECB CD-ROM, you would type the following in the RUN dialogue: E:\setup.exe.

WINDOWS 3.XX USERS:

In FILE MANAGER, click on the drive where your CD-ROM operates. The root directory of this drive will contain the executable file "setup.exe"; double click on this file to begin the installation process. Opening the RUN dialogue and typing the full path to the file "setup.exe" can also start the installation process. The RUN dialogue is accessible from the file manager by clicking on the file menu option; within the file menu the RUN dialogue is the seventh option from the top. If the E is the drive letter where you have loaded the ECB CD-ROM, you would type the following into the RUN dialogue: E:\setup.exe.

2. The installation program will now initialize. Once initialized you will be presented with a welcome dialogue. Please read this carefully and when done use the mouse to click on the next button to proceed to the next step.

NOTE: You may use the alt-B and alt-N key combinations to move backward and forward, respectively, instead of the mouse. If at

any time you would like to cancel the installation process, click the cancel button. Canceling the installation will end the installation program and will restore your computer to its pre-installation state.

3. The installation program will now open the user information dialogue. Please enter your name and company information into the text entry areas provided and, when ready, click the NEXT button to proceed with the installation. NOTE: On many computers this information will automatically be filled in for you. If this information is correct please click the NEXT button to proceed; otherwise you may overwrite this information with the correct information.

4. Next, you will review the location where the ECB programs will be installed. The default installation location is C:\ecbw; to change the installation directory click the BROWSE button. The Choose Folder dialogue will open where you can use the file directory tree and or the path box to indicate the installation directory. It is recommended that most users use the default directory. To proceed click the NEXT button.

5. The Setup Type dialogue is opened next. This dialogue presents you with a choice of either a typical setup or a custom setup. The typical setup will install all ECBs onto your hard drive, while the custom setup will enable you to choose which ECBs you would like to install. Highlight the type you wish to install, then click 'NEXT'.

NOTE: Choosing the custom install will open the dialogue Select Components. This dialogue will allow you to choose precisely the SASS and TFS components that you want to install. This option is primarily for users who are only interested in specific data sets and/or have severe hard drive space limitations on their computers. As an aid to the user, the size of all components are listed next to each ECB's name, so you will know exactly how much hard drive space is required for each component. A total for all selected ECBs appears near the bottom

of the screen, designating the total hard drive space required. Initially, all components are preselected; if you do not de-select any of the components, they will all be installed, as in the typical setup. If you wish to not install a specific component, click on the 'checked' box to the left of the component you do not wish to install to remove the check, until only the components you want to install have checks next to them. For example, if you wish to install only the TFS 1994-95 ECB, you would choose custom install, and remove the checks for all other ECBs until only the TFS 1994-95 is checked. When you have finished making all of your selections, please click on the NEXT button to proceed.

6. The next dialogue allows you to review the name of the program group where the applications start icons will be installed. You may rename the program group by overwriting the current text. When you are satisfied with program group name, please click the NEXT button to proceed.

7. The next dialogue provides a summary of installation options that you have chosen. If this is acceptable, please click the NEXT button to start the installation. If not, use the BACK button to return to the options you would like to alter.

8. The installation will begin now. Several status bars will be shown to indicate the status and progression toward completion of different parts of the installation. When the installation has completed you will be presented with the setup completion dialogue; to finish the setup, please click the FINISH button.

9. To start the ECB, click on the appropriate icon from the ECB group.

III. Getting Started (DOS Version)

The following are the hardware requirements and installation procedures for the DOS-based Electronic Codebook (ECB).

A. Hardware Requirements

The SASS/TFS ECB is designed to operate on an IBM PC or compatible

computer
(286 or better) with:

1. At least 640 KB of available memory free.
2. A hard disk drive with at least 4 MB free for installation. Additional hard disk space will be required for storage of downloaded data; the amount of disk space required will vary depending on the number of variables selected during the ECB session.
3. CD-ROM reader with appropriate controller and interface cable for your PC.
4. MS-DOS version 3.0 or higher

B. Installation

WARNING: Check the available space on your hard drive before beginning the installation process! You will need at least 1.1MB of unused space on your hard drive for the installation process to copy all of the ECB system files.

1. Place the CD-ROM into the CD-ROM reader and, from the DOS prompt, type:

```
E:\DOSINSTL.BAT
```

NOTE: For purpose of this example, the CD-ROM drive is designated as "E:".

2. The install program will copy all of the files required to RUN the ECB to the root (\ECB) directory, retaining each subdirectory for each cycle of SASS and TFS (\ECB\SA1, \ECB\SA2, \ECB\SA3, \ECB\TF1, \ECB\TF2, \ECB\TF3). When you finish copying the necessary files onto your hard drive, your directory structure should look like this:

```
C:\ECB
\SA1 (contains software for SASS 1987-88 ECB)
\SA2 (contains software for SASS 1990-91 ECB)
\SA3 (contains software for SASS 1993-94 ECB)
\TF1 (contains software for TFS 1988-89 ECB)
\TF2 (contains software for TFS 1991-92 ECB)
\TF3 (contains software for TFS 1994-95 ECB)
```

with all files copied from the CD-ROM onto your hard drive within this structure. The DOSINSTL.BAT program will only install the DOS related files. It is not necessary to copy the documentation or data files

onto your hard drive.

3. If you plan to store SAS-PC or SPSS-PC program code in a subdirectory different from the one above, create a separate subdirectory as follows:

```
C:\ECB\SA1\MD SASSPGM
```

NOTE: You can make a SASSPGM directory under every subdirectory (SA1, SA2, SA3, TF1, TF2, TF3) so all output files relating to each cycle can be kept together.

4. To RUN the ECB software: (this example will bring up the ECB for SASS 1987-88)

At the C prompt (C:\>) type: CD ECB\SA1 and press ENTER.

From the C:\ECB\SA1> directory type: ECBSA1.EXE and press ENTER.

NOTE: In the subdirectory for each cycle, there is an executable file (ECBSA1.EXE, ECBSA2.EXE, ECBSA3.EXE, ECBTF1.EXE, ECBTF2.EXE, and ECBTF3.EXE) that will RUN that cycle's ECB.

5. The FIRST TIME you run the ECB software, it will clear the screen and tell you that it cannot find needed files and will not work properly. This is because the directories where the programs and data are stored have not yet been specified to the ECB program. Press any key (other than "ESC") to engage the INSTALLATION MENU. If the ECB software has trouble locating certain files at some point in time, you may be presented with the INSTALLATION MENU. Simply place your CD-ROM in its drive, and re-enter the information on the INSTALLATION menu. If by chance, you end up in the INSTALLATION MENU without the CD-ROM in its drive, you may have to reboot your computer in order to exit the program. Place the CD-ROM in its drive, then type "ECBSA1" again; the installation parameters should be in place. If not, re-enter them and you will be put directly into the ECB screen.

6. Change all drive and subdirectory (path) settings to fit your equipment (press function key 1 [F1] to get HELP). This example will use the data paths created by a typical installation for the SASS 1987-88 software. Initially, the installation menu will have the default paths C:\SA1CB in the first two options. It is essential that

you change these settings to the correct data path. Using the arrow keys, highlight the Default Drive and Path (first line in the Installation Menu) and press ENTER to change the settings. The software will prompt you for the correct path. Type in C:\ECB\SA1 and press ENTER. The setting for the Default Drive and Path will now reflect the change you just made. Arrow down to the next line (SPSS/SAS/Extract files drive and path code) and press ENTER. If you created a subdirectory within the SA1 directory to store your extract programs (recommended), at the prompt type in C:\ECB\SA1\SASSPGM and press ENTER. Finally, arrow down to the third line, (compact disk drive) and press ENTER. At the prompt, type in E (or the correct CD-ROM drive letter for your machine) and press ENTER. You may also adjust the other settings in the installation menu at this time, though it is not necessary. At this point, press ESC, and the installation menu should disappear and be replaced by the ECB. If it does not, make certain the settings in the first three lines of the installation menu are correct (a common problem is to attempt to use the C:\ECB\SA1\SASSPGM directory before creating it on your hard drive—simply go back to DOS, create the directory, and try again). If you are still having trouble getting the ECB to run, please refer to the ECBDOS.TXT file in the DOC folder on the CD-ROM for a more complete explanation of getting started.

IV. Help

For assistance regarding data retrieved from the CD-ROM, send e-mail to SASSDATA@ed.gov or call NCES at (202)219-1461.

For installation or technical assistance, send e-mail to nedrc@inet.ed.gov or call the National Education Data Resource Center (NEDRC) at (703)845-3151.

V. Warnings and Notes

1. This CD-ROM contains the latest versions of the data for all SASS and TFS cycles. The SASS 1987-88 and TFS 1988-89 files have been imputed since the last version of this data was released.

Created variables from the SASS 1993-94 and TFS 1994-95 cycle have been computed and added to the SASS 1987-88 and 1990-91, and the TFS

1988-89 and 1991-92 files to match the SASS 1993-94 and TFS 1994-95 specifications. The data for all previously released cycles of SASS and TFS have also been cleaned since their last release (invalid responses changed or reported as missing, 'no longer valid' responses changed to the current value, etc.), meaning that frequencies and univariates from this data may differ slightly from results obtained from earlier releases for this data. In addition, there are several variables in several different files that have idiosyncracies (valid responses that had no respondents (a block of questions in TFS 1988-89 (TFS062 through TFS076) where no one responded 'very dissatisfied'), or obviously out of range values (one teacher has TOTEXPER=192 in the SASS 1987-88 teacher file, by summing FTPUB, PTPUB, FTPVT, and PTPVT)) that could not be cleaned, since the original questionnaires have been destroyed. Variables that could not be verified are unchanged from the previous releases of the data. The data on this CD-ROM supersedes any earlier versions of these datasets.

2. Due to the limitations of the electronic codebook software, responses to questions may be severely abbreviated or truncated. For many questions, the complete list of responses appears in the question's description window. For questions that do not include all possible responses, please refer back to the original questionnaire to obtain the complete response. Additional copies of the questionnaire publications may be obtained from NCES.

3. All SASS/TFS files are already sorted in ascending order by "SURVEY" and "CNTLNUM" and do not need to be pre-sorted before merging.

4. When "merging" public and private school data or public and private school principal data or public and private school teacher data, use "SECTOR" for the "merge" variable. This will actually be a "Set Public Private" statement which will append the private data to the public data into one file.

5. When merging school data with teacher and administrator data within each cycle, use "SCHCNTL" for the merge variable and sort the files by

"BY SCHCNTL".

6. All SAS-PC and SPSS program code generated by the ECB should be edited. While most of the program code is functional, users may wish to change output file names and some labels. SPSS code for FREQUENCIES and DESCRIPTIVES are included even if no variables are listed; delete such entries. SAS code includes a FORMAT statement.
***A number of variables were recoded to give more meaningful information. Several variables, notably ones dealing with the number of dependent children, other dependent adults, and number of breaks in service, were recoded to report a frequency, but are actually continuous variables on the flat data file. The unedited SAS code will RUN a frequency on these variables, with improper labels, yielding unintended results. Simply change the frequency to a univariate in the code to receive more conventional output.
7. After installing the Electronic Codebooks onto your hard drive, the DOS version will require you to make a number of setting adjustments (such as CD-ROM drive letter, destination directory for output program code, etc.), but there is no such requirement for the windows ECB. By changing many of the default settings, you will reduce the amount of editing that will need to be done to any output program code. After starting the ECB, go into the 'file' menu and select 'setup'. You may now adjust the output directory and CD-ROM drive letter that will be inserted in the generated code, eliminating the need to edit these lines in the ECB created program.
8. Each TFS observation has the entire original teacher record attached. Remember, all TEACHER data (TSC###/T####) refers to the SASS cycle years and TFS data (TFS###) refers to one year later.
9. Caution: The SASS 1987-88 and TFS 1988-89 College Major listing is different from subsequent survey cycles.
10. The ECB does not show frequencies for "0" responses. Two variables in the TFS 1988-89 (TSC111 and TSC123) seem to disappear because of this situation. For both of these records there is a frequency of 170 who responded "0" and the rest are missing (.).
11. When using the Windows version of the ECB, scrolling down using

the arrow column on the right side of the window will not give you the new 'SECTION' header until you place your cursor on a variable. This does not mean that you have to TAG a variable to get the SECTION header, just use your mouse and click on the variable (not the box to the left of the variable) and you will see the header change when appropriate. This is especially important if you leave one questionnaire and begin another, for example, you can browse from the Private Administrator file into the Public School file without the header changing.

12. TFS 1988-89 Public Teacher file, TUITIN is represented as a frequency-

- 1 = Public schools that charge tuition
- 2 = Public schools that did not respond to the question
- BLANK = Public schools where the question did not apply.

On the flat data file, this variable is continuous, and the unedited extract code will give a frequency-resulting in a large volume of unexpected output. By recoding the one school that did not respond to the question with a value of missing and changing the frequency to a univariate, the user will receive much more useful output. The current record for the school that did not respond contains 99999 in the TUITIN field.

13. In all prior releases of SASS/TFS data, the imputation flags were named "F_Varname". All of the flags are now named "FVarname" (the underscore after the F has been removed) to retain the full name of the flag for the SAS format created when SAS code is generated. There are several variables (and their flags) in TFS 1988-89 that had a letter appended to the end of the variable name. The variables affected were: TFS027, TFS029, TFS121, and TFS122. Their imputation flags are represented by dropping the 'S' from their name as well as the underscore (ex. FTF027B).

14. In the 1987-88 SASS, a separate "District" level questionnaire was sent to the private schools in the sample, which is represented in the Private District file. Some of these questions have been collapsed to insure the confidentiality of the school. This file can be linked to

delete the engine that runs any other ECBs along with all parts of the SASS/TFS CD-ROM. In order to avoid this, you can delete the individual folders (SA1, TF2, etc.), leaving the programs in the ECBW folder alone. This will cause some paths in the start menu to become non-responsive, but it will free up space on the hard drive, and will enable you to use any other ECBs. If the engine is accidentally deleted, you may restore it by reinstalling any of the other ECBs, or by reinstalling the engine from the SASS/TFS CD-ROM, by choosing custom install and deselecting all individual codebooks, so that only the engine is installed.

19. Extreme caution should be used when merging two files together as unexpected results may occur. For example, if the following code is

```
used:  
DATA MERGED;  
MERGE TEACHER (IN=A) SCHOOL (IN=B);  
IF A AND B;  
BY SCHCNTL;  
RUN;
```

The resultant data file will contain only teachers with schools that responded to the survey, and will eliminate all teacher records for teachers whose schools did not respond to the survey. By substituting "IF A"; in the earlier code, you will retain all teachers, while merging school data onto teacher records for teachers with schools. Other hazards include overwriting sampling data (by merging the entire school file onto the teacher file, the sampling variables from the school file will overwrite the sampling variables from the teacher file-a suggestion is to merge only the variables you need for analysis onto the 'merged' data set); merging many to one or one to many (as is the case with several teachers from one school, use caution on which direction you merge); creating computed variables in a merge statement in SAS can yield unexpected results (the recommended procedure is to create your merged data set and then compute the new variables in a work data set). If you have any question about the integrity of your merged data set, compare the total number of records both before and after the merge, so you know that the merge was successful.

20. In previous releases of the SASS and TFS data files, teachers and administrators whose schools did not respond to the school survey had a missing value for SCHCNTL. In this release of the data, SCHCNTL has been inserted in the record, enabling the researcher to merge administrators with teachers, even if their respective school did not respond to the questionnaire.

21. Certain variables about District policies in the SASS 1993-94 were moved from the District (TDS) file to the Public School file. Those variables can be identified on the ECB by the "District Policies" or "District Teachers" header. These correspond to similar questions on the private school questionnaire. These questions reflect school employment policies, compensation and training. Note that these questions were pulled onto the school questionnaire only in the SASS 1993-94 school file, and not in previous cycles. These variables were removed from the District ECB and flat data file, their names changed (from a leading D to a leading S-ex. D0995 to S0995), however the question may be found in the District questionnaire.

22. There are slight differences between the weighted count of TFS 1994-95 public school teachers in this CD-ROM datafile and the published figures from "Characteristics of Stayers, Movers, and Leavers: Results from the Teacher Followup Survey, 1994-95." The unweighted number of public school teachers in the current datafile has 4,528 teachers, rather than 4,525. The latter number of teacher records was used to generate all of the data for the report. The 3 teachers were erroneously categorized during processing as Bureau of Indian Affairs (BIA) teachers, although they were actually public school teachers working in BIA schools. When the 3 teacher records are added to the public school teacher file, the weighted number of public school teachers changes from 2,555,781 to 2,556,113 in Tables A and B of "Characteristics of Stayers, Movers, and Leavers." The remaining data shown in the report did not change, as the percent change due to this error is so small as not to affect overall percentage distributions.

VI. Compact Disk Structure

This CD-ROM contains ALL available SASS 1987-88, 1990-91, 1993-94 and TFS 1988-89, 1991-92, and 1994-95 data and an Electronic Codebook System (ECB) for using them. The ECB was developed by Dennis Carroll with the Department of Education's National Center for Education Statistics. The root directory (ECBW) of this CD-ROM contains two types of files. The first is the README.TXT which provides instructions for how to use this CD-ROM. The README.TXT instruction file may be printed using any available local editor or the DOS PRINT command. The second type of files are the Install program files for installing either a Windows- or DOS-based ECB automatically to your hard drive or network drive.

\ECBW\ -- Root directory

- \README.TXT -- Instructions for installing the ECB system on a PC;
- \ECBW.EXE - Electronic codebook software
- \ECBW.HLP - Help file
- \TF3ECB.CFG
- \SA2ECB.CFG
- \TF1ECB.CFG - ECB configuration files
- \TF2ECB.CFG
- \SA1ECB.CFG
- \SA3ECB.CFG
- \TBPR01W.DLL
- \TBPR02W.DLL
- \TBPR03W.DLL
- \TBPR04W.DLL - ECB Dynamic Link Libraries
- \TBPR05W.DLL
- \TBPR06W.DLL

\SETUP.EXE - Installation files for the ECB for Windows and related files

- \OS.DAT
- _ISDEL.EXE
- \LANG.DAT
- _INST16.EX_
- _INST32I.EX_
- _SETUP.DLL
- \SETUP.INS
- _SYS1.CAB
- \DATA.TAG
- \SETUP.INI
- _USER1.CAB
- \LAYOUT.BIN
- \CTL3D.DLL
- \DATA1.CAB
- \SETUP.BMP
- \SETUP.LID
- \SETUP16.BMP

\DOSINSTL.BAT - Install program for the ECB for DOS

\SA1\ -- Subdirectory for installing the 1987-88 SASS cycle.

```
    ECB.HLP - Help file
    ECBSA1.EXE - Electronic codebook software for DOS
(executable file)
    EXTRSA1.EXE - Software for extracting data in ASCII format
from
    CD-ROM to your hard drive
    SA1.ICO - SASS 1987-88 icon
    ECBSPEC.SA1 - Random access file
    SA101.CDC - Random access file
    SA102.CDC - Random access file

\SA2\ -- Subdirectory for installing the 1990-91 SASS cycle.
    ECB.HLP - Help file
    ECBSA2.EXE - Electronic codebook software for DOS
(executable file)
    EXTRSA2.EXE - Software for extracting data in ASCII format
from
    CD-ROM to your hard drive
    SA2.ICO - SASS 1990-91 icon
    ECBSPEC.SA2 - Random access file
    SA201.CDC - Random access file
    SA202.CDC - Random access file

\SA3\ -- Subdirectory for installing the 1993-94 SASS cycle.
    ECB.HLP - Help file
    ECBSA3.EXE - Electronic codebook software for DOS
(executable file)
    EXTRSA3.EXE - Software for extracting data in ASCII format
from
    CD-ROM to your hard drive
    SA3.ICO - SASS 1993-94 icon
    ECBSPEC.SA3 - Random access file
    SA301.CDC - Random access file
    SA302.CDC - Random access file

\TF1\ -- Subdirectory for installing the 1988-89 TFS cycle.
    ECB.HLP - Help file
    ECBTF1.EXE - Electronic codebook software for DOS
(executable file)
    EXTRTF1.EXE - Software for extracting data in ASCII format
from
    CD-ROM to your hard drive
    TF1.ICO - TFS 1988-89 icon
    ECBSPEC.TF1 - Random access file
    TF101.CDC - Random access file
    TF102.CDC - Random access file

\TF2\ -- Subdirectory for installing the 1991-92 TFS cycle.
    ECB.HLP - Help file
    ECBTF2.EXE - Electronic codebook software for DOS
(executable file)
    EXTRTF2.EXE - Software for extracting data in ASCII format
from
    CD-ROM to your hard drive
    TF2.ICO - TFS 1991-92 icon
    ECBSPEC.TF2 - Random access file
    TF201.CDC - Random access file
    TF202.CDC - Random access file

\TF3\ -- Subdirectory for installing the 1994-95 TFS cycle.
    ECB.HLP - Help file
```

ECBTF3.EXE - Electronic codebook software for DOS
(executable file)
EXTRTF3.EXE - Software for extracting data in ASCII format
from

CD-ROM to your hard drive
TF3.ICO - TFS 1994-95 icon
ECBSPEC.TF3 - Random access file
TF301.CDC - Random access file
TF302.CDC - Random access file

\DATA\ -- Contains the files that comprise the SASS/TFS datasets, by
cycle

\SASS8788\ - Subdirectory of SASS 1987-88 datasets
 \TDSPUB87.DAT - Public District 1987-88
 \TDSPVT87.DAT - Private District 1987-88
 \ADMPUB87.DAT - Public Administrator 1987-88
 \ADMPVT87.DAT - Private Administrator 1987-88
 \SCHPUB87.DAT - Public School 1987-88
 \SCHPVT87.DAT - Private School 1987-88
 \TCHPUB87.DAT - Public Teacher 1987-88
 \TCHPVT87.DAT - Private Teacher 1987-88

\SASS9091\ - Subdirectory of SASS 1990-91 datasets
 \TDSPUB90.DAT - Public District 1990-91
 \ADMPUB90.DAT - Public Administrator 1990-91
 \ADMPVT90.DAT - Private Administrator 1990-91
 \SCHPUB90.DAT - Public School 1990-91
 \SCHPVT90.DAT - Private School 1990-91
 \TCHPUB90.DAT - Public Teacher 1990-91
 \TCHPVT90.DAT - Private Teacher 1990-91

\SASS9394\ - Subdirectory of SASS 1993-94 datasets
 \TDSPUB93.DAT - Public District 1993-94
 \ADMPUB93.DAT - Public Administrator 1993-94
 \ADMPVT93.DAT - Private Administrator 1993-94
 \SCHPUB93.DAT - Public School 1993-94
 \SCHPVT93.DAT - Private School 1993-94
 \TCHPUB93.DAT - Public Teacher 1993-94
 \TCHPVT93.DAT - Private Teacher 1993-94

\TFS8889\ - Subdirectory of TFS 1988-89 datasets
 \TFSPUB88.DAT - Public Teacher Followup Survey 1988-89
 \TFSPVT88.DAT - Private Teacher Followup Survey 1988-89

\TFS9192\ - Subdirectory of TFS 1991-92 datasets
 \TFSPUB91.DAT - Public Teacher Followup Survey 1991-92
 \TFSPVT91.DAT - Private Teacher Followup Survey 1991-92

\TFS9495\ - Subdirectory of TFS 1994-95 datasets
 \TFSPUB94.DAT - Public Teacher Followup Survey 1994-95
 \TFSPVT94.DAT - Private Teacher Followup Survey 1994-95

\PROGCOMP\ - Contains the files that comprise the SASS/TFS Programmers
companions, by cycle

\SASS8788\ - Subdirectory of SASS 1987-88 programmers
companions

 \TDSLAY87.TXT - District 1987-88
 \ADMLAY87.TXT - Administrator 1987-88
 \SCHLAY87.TXT - School 1987-88
 \TCHLAY87.TXT - Teacher 1987-88

\SASS9091\ - Subdirectory of SASS 1990-91 programmers
companions

\TDSLAY90.TXT - District 1990-91
\ADMLAY90.TXT - Administrator 1990-91
\SCHLAY90.TXT - School 1990-91
\TCHLAY90.TXT - Teacher 1990-91

\SASS9394\ - Subdirectory of SASS 1993-94 programmers
companions

\TDSLAY93.TXT - District 1993-94
\ADMLAY93.TXT - Administrator 1993-94
\SCHLAY93.TXT - School 1993-94
\TCHLAY93.TXT - Teacher 1993-94

\TFS8889\ - Subdirectory of TFS 1988-89 programmers
companions

\TFSLAY88.TXT - Teacher Followup Survey 1988-89

\TFS9192\ - Subdirectory of TFS 1990-91 programmers
companions

\TFSLAY91.TXT - Teacher Followup Survey 1991-92

\TFS9495\ - Subdirectory of TFS 1994-95 programmers
companions

\TFSLAY94.TXT - Teacher Followup Survey 1994-95

\DOC\ -- Contains ASCII text files that detail the SASS/TFS
datasets,

by cycle.

\SASS8788.TXT - SASS 1987-88 User's Guide
\SASS9091.TXT - SASS 1990-91 User's Guide
\SASS9394.TXT - SASS 1993-94 User's Guide
\TFS88-89.TXT - TFS 1988-89 User's Guide
\TFS91-92.TXT - TFS 1991-92 User's Guide
\TFS94-95.TXT - TFS 1994-95 User's Guide
\ECBWIN.TXT - The SASS/TFS CD-ROM: ECB User's Guide for

Windows

\ECBDOS.TXT - The SASS/TFS CD-ROM: ECB User's Guide for DOS
\TECHMAN.TXT - Technical manual (written for researchers)
\APPENDXE.TXT - Comma delimited file containing SASS 1990-91
variable names for the District, and Public

and

Private School files.